National Pollutant Discharge Elimination System (NPDES)
Multi-Sector General Permit for Stormwater Discharges from Industrial Facilities (MSGP)

Compliance Evaluation Inspection Report

P4 Production, LLC./Blackfoot Bridge Mine
(a subsidiary of the Monsanto Company.)
Soda Springs, Idaho

NPDES Permit Tracking # IDR05CR88

Inspection date: September 23, 2014
Report completion date: December 1, 2014

Prepared by:

Patrick Stoll
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Office of Compliance and Enforcement
Inspection and Enforcement Management Unit
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I. Facility Information

Facility Name:	P4 Production, LLC., Blackfoot Bridge Mine (a wholly owned subsidiary of Monsanto Co.)
NPDES Tracking No.:	IDR05CR88 Effective date: 04/07/2012 Expiration date: 09/29/2013 – Administratively Extended
Facility Contact(s):	Rachel Roskelley, Senior Environmental Engineer Phone: (208) 547-1248 Branden Hendriks, Mine Manager (208) 547-4300
Facility Type:	Phosphate Rock Mining, SIC Code #1475 MSGP Sector J
Facility Location:	3268 Blackfoot River Road Soda Springs, ID 83276
Mailing Address:	1853 Highway 34 Soda Springs, ID 83276

II. Inspection Information

Inspection Date(s):	September 23, 2014
Inspector(s):	Patrick Stoll, Inspector (lead) EPA Region 10/OCE/IEMU/IOO (208) 378-5772 Wayne Crowther, P.E., Sr. Regional Engineer Idaho Department of Environmental Quality (IDEQ) Pocatello Regional Office; (208) 236-6160
Entry Time: Exit Time:	1:00 pm 5:15 pm
Entry Time: Exit Time:	8:00 am 09/24/2014 for Closing Conference 9:00 am 09/24/2014
Weather Conditions:	Warm, clear, temperature in the 70's (Fahrenheit)

Receiving Waters:	Unnamed tributary associated with Beaver Pond Drainage Area and wetlands adjacent to the Blackfoot River.
Purpose:	Evaluate compliance status with respect to the facility's NPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP), 2008 version, administratively extended.

III. Inspection Entry

Given the remote location and the driving distance/time from Boise (approximately 290 miles/5 hours), I chose to make this an announced inspection. I contacted Randy Vranes, the P4 Production (P4) Mineral Operations Business Unit Lead the day before the inspection to make the necessary arrangements.

In addition to contacting Mr. Vranes, I also contacted Douglas Tanner, the Waste and Remediation Manager in the Idaho Department of Environmental Quality's (IDEQ) Pocatello office. Jim Werntz, the Director of EPA's Region 10 Idaho Operations Office, suggested I contact someone within IDEQ's Pocatello office to let them know that I would be conducting phosphate mine inspections the area. Mr. Tanner put me in touch with Wayne Crowther, IDEQ Sr. Regional Engineer. Mr. Crowther is responsible for reviewing documents associated with many of the mines in the area to verify compliance with IDEQ's surface and groundwater quality standards and Clean Water Act Section 401 certification requirements.

Mr. Crowther met me in Lava Hot Springs, Idaho shortly after noon on the 23rd. Mr. Crowther rode with me to the Blackfoot Bridge Mine (BFB) northeast of Soda Springs, Idaho. We arrived at the new location of the mine office at 1:00 pm (the office is no longer located near the old Ballard Mine shop area – it is now located approximately 200 yards beyond the old haul road intersection, on the east side of the road). Upon arrival, Mr. Crowther and I met with Rachel Roskelley, Monsanto Senior Environmental Engineer and Branden Hendriks, BFB Mine Manager. Ms. Roskelley was filling in for Monsanto Environmental Engineer Molly Prickett. Ms. Prickett is normally responsible for stormwater compliance at BFB but was out-of-state at the time of this inspection. The four of us moved into a conference room where I presented my inspection credentials to Ms. Roskelley and Mr. Hendricks and explained that the purpose for the visit was to verify the facility's compliance with EPA's Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP).

IV. Scope of Inspection

As noted above, this inspection was intended to evaluate the degree to which the BFB mine (there are other P4 mine sites in the area) was in compliance with the requirements of the MSGP. In particular, the scope of the inspection included the

following elements:

1. An opening conference describing the purpose of the inspection.
2. A detailed review of the currently active status of the BFB mine (I had previously conducted an inspection of the mine, during its development stage, in September 2012).
3. A detailed review of the BFB Stormwater Pollution Prevention Plan (SWPPP) including all site maps, plans, best management practices (BMPs) for controlling stormwater run on and runoff from the site, and site inspections (review included an off-site evaluation of the SWPPP).
4. An on-the-ground review of the entire BFB site.
5. A closing meeting summarizing observations and issues noted during the inspection.

V. Facility Background

The BFB mine is a new mine. I previously inspected the mine in September of 2012 when it was still in the development stage and operating under the requirements of the Construction General Permit for stormwater discharges. A copy of my report from that inspection, included in Attachment D, provides more detailed information about the site's history and background. At the beginning of this inspection, Mr. Hendricks and Ms. Roskelley provided me with an overview of current operations at the site.

North Pit

According to Mr. Hendricks and Ms. Roskelley, the first active mining at the BFB mine began in the northwest corner of the North Pit in July of 2013. Referred to as Phase 1 (see Photos 1, 3 and 6-12), mining in this area expanded horizontally into what would have been Phase 2 (negating the need for a designated "Phase 2"). As mining proceeded vertically, groundwater eventually began to flow into the pit from fractures along a natural fault line. Once groundwater was encountered and began to fill the pit, pumps located along the pit wall were used for dewatering to pump water, via 4-6" HDPE lines, up to the nearby "North Tipple Pond" (see photos 15-18) at an average rate of 600 gpm. From the tipple pond, water is pumped to lined Central Pond #2 (CP2) to allow for additional settling of solids before it is pumped to one of the two Water Management Ponds (WMP1 or WMP2). Electronically controlled evaporation cannons located along the western border of the WMPs (the direction from which the prevailing winds usually blow onto the site) are used to facilitate evaporation of water from the ponds (see Photos 19-21). The canons are automatically shut down anytime there is a shift in the prevailing winds that might cause any spray or mist from the canons to blow off-site.

Mining in Phase 1 of the North Pit progressed below the level at which groundwater flowed into the pit until Phase 1 was mined out. At the time of this inspection, work had begun on Phase 3 (see Photos 13-14). The overburden from Phase 3 was being used to backfill Phase 1, immediately west of Phase 3. Except for a small area at the

south end of Phase 1 (an area that would eventually be used for managing groundwater from Phases 3 and 4), Phase 1 had been backfilled to a level well above the water table. As with Phase 1, Phase 3 will be excavated below the level at which groundwater flows into the pit. The pit will be allowed to fill during the winter months until dewatering and excavation resumes in the spring of 2015. As soon as Phase 3 has been mined out, mining efforts will shift to Phase 4 (see Photo 3).

Groundwater Monitoring in the Vicinity of the North Pit

In June of 2011, IDEQ issued a Point of Compliance (POC) Determination for the BFB mine (issued, in part, to verify compliance with IDEQ's groundwater quality standards). As required by the POC, a series of six Point of Compliance (POC) groundwater monitoring wells were installed downgradient from the North Pit, between the northwest corner of the pit and the Blackfoot River (see Photo 3). Beginning in 2012, groundwater from these wells was sampled and analyzed on a monthly basis to establish a local baseline. As groundwater began to flow into Phase 1 of the North Pit in the spring of 2014, the groundwater monitoring associated with the POC wells shifted to a weekly schedule. According to Mr. Hendricks and Ms. Roskelley, the level of selenium in the groundwater samples remained consistent with background levels (this was in line with information I received from IDEQ mine project manager Margie English). Mr. Hendricks and Ms. Roskelley did note that some secondary constituents (primarily iron, manganese, and aluminum) were identified in the weekly groundwater samples that had not been predicted and were not consistent with earlier modeling efforts. By the time I conducted this inspection, there was no definitive explanation for the presence of these constituents.

East Overburden Pile

Overburden and additional waste rock removed from Phase 1 of the North Pit has been placed in the East Overburden Pile (EOP) located on the east side of what will one day become the Mid Pit at BFB (see Photos 4, 5 and 26-28). Core material from Phase 1 (waste rock with the highest concentration of seleniferous material; e.g., center waste shale) has been placed within the central portion of the EOP and capped with a geosynthetic clay liner (GCL). Additional material will be added to the EOP, particularly when mining activity begins in the Mid Pit (see the *Revised Adaptive Management Plan for Water Management System, P4 Production, LLC, Blackfoot Bridge Project, Idaho* contained in Attachment C for EOP construction details). At the time of this inspection, an extensive array of BMPs (primarily straw wattles) was being installed on the slopes of the EOP (see Photos 26-28).

East Side Water Management Ponds

A series of three stormwater management ponds (EP1 – EP3) have been installed in the ephemeral drainage east of the EOP (see Photos 5 and 27). The most downgradient of the series, EP-1, includes a dam with a decant piping system and valves that can be opened to allow water to flow through the dam or closed to allow ponding above it.

Depending on whether or not the water behind the EP-1 dam meets Idaho Water Quality Standards (IWQS), water that flows across the spillway can be diverted to flow into nearby Fish Pond/Wetland K area (if water meets all IWQSs) with a subsequent discharge to CP1 or, if IWQSs are exceeded, to CP2 followed by a discharge to one of the two WMPs.

VI. Stormwater Pollution Prevention Plan (SWPPP) Review

The BFB SWPPP is a detailed and generally well organized document. Given its volume and the fact that a second copy was available at the BFB office, I took a copy of the SWPPP with me for further review that evening. As part of the review process, I did note some potential areas of concern. These are identified and discussed in Section VIII of this report.

VII. Site Tour

Following my cursory review of the SWPPP, Mr. Hendricks and Ms. Roskelley provided Mr. Crowther and me with a complete tour of the mine site. We began our tour with a visit to the North Pit. From there we visited the north tipple pond (where groundwater pumped from the North Pit is temporarily stored) followed by the area around the primary water management ponds (CP1 and CP2; WMP1 and WMP2), the East Overburden Pile (EOP), and the smaller east side water management ponds. The photo log included in Attachment A provides a good overview of the mine status at the time of this inspection.

VIII. Areas of Concern

The following areas of concern were noted during the course of this inspection:

1) **Signature Authorization**: Part 5.1.7 of the 2008 MSGP (administratively extended at the time of this inspection) imposes signature requirement for certain documents in the SWPPP. Subsection 11 in Attachment B of the MSGP provides additional information describing these signatory requirements. The P4 BFB SWPPP identifies the person with signature authority by title (Business Unit Lead, Mineral Activities) but provides no delegation of authority to anyone else who might be responsible for signing any forms requiring the National Pollutant Discharge Elimination System (NPDES) certification statement specified at 40 CFR 122.22 (d). A copy of the P4 Signatory Authority and the facility's justification for **not** providing any further delegation of authority is included in Attachment B of this report.

2) **Inspection Certifications**: Part 4.1 of the MSGP imposes a requirement to conduct and document routine facility inspections. The MSGP recordkeeping template provided by EPA on its MSGP web site includes a form for documenting these inspections. The form includes the 40 CFR 122.22 (d) certification statement in conjunction with the signature line (as does the

Quarterly Visual Assessment form used to satisfy Part 4.2 of the MSGP). The certification statement is typically included on all the inspection forms prepared by facilities subject to the MSGP (this statement is explicitly required in the similar Construction General Permit at Part 4.1.7.2). During the course of this inspection, I noted that the certification statement was no longer included on either the routine or the quarterly visual inspection forms at BFB. P4 claims that the wording in Appendix B.11.B of the MSGP indicates that only the forms submitted to EPA require the authorized signature (and, by extension, the certification statement). P4 maintains that only the annual reports are submitted to EPA; since the routine facility inspections and the quarterly visual assessments are not submitted, an authorized signature is not required. In an effort to resolve this issue, I spoke directly with stormwater personnel in EPA headquarters. I was told that the failure to explicitly require the authorized signature and certification on the routine and the quarterly visual inspection reports was an oversight; that this was always the intent (as evidenced by the MSGP templates).

3) **Qualifying or Measurable Storm Event**: I had concerns about the lack of any description of the methodology used for identifying a qualifying or measurable storm event (e.g., Part 8.J.4.2.1, "…within 24 hours of the end of a storm event of 0.5 inches or greater…."). I expressed these concerns during the closing conference. In an October 23, 2014 follow-up letter from P4 Business Unit Lead Randy Vranes (see Attachment B), Mr. Vranes noted that clarifying information has since been added to the SWPPP.

4) **Employee Training**: Appendix A of the MSGP identifies "qualified personnel" as "…those who possess the knowledge and skills to assess conditions and activities that could impact stormwater quality at your facility, and who can also evaluate the effectiveness of control measures". To satisfy the very general employee training requirements of Part 2.1.2.9 of the MSGP, all employees at BFB are required to watch a slide show that provides a very brief overview of the MSGP and the importance of stormwater management. Part 5.1.1 of the MSGP addresses the role and responsibilities of the designated Stormwater Pollution Prevention Team. I was concerned that the basic slide show presented to all staff members did not provide sufficient detail to qualify any of the BFB staff for a role as a Stormwater Pollution Prevention Team member. In his October 23, 2014 response to my closing conference remarks, Mr. Vranes expressed his belief that the level of training currently provided at the BFB was sufficient to satisfy the employee training requirements of the MSGP. However, he did agree that additional position-specific training would be a best management practice - one that would be implemented for the Stormwater Pollution Prevention Team members in the future.

5) **Quarterly Visual Assessment Procedures**: Part 4.2.1 of the MSGP requires the collection and visual analysis of a stormwater sample from each outfall once each quarter (assuming that the water management system at BFB is

operating properly, the only stormwater discharge from the site would be from Outfall #2 – the spillway at CP1). Rather than the four samples required by the MSGP (the collection of which can be distributed during the season(s) when precipitation is most likely to occur rather than one each quarter), only one sample was collected. This sample was collected on 03/20/2014 and shipped to a laboratory for chemical analysis. When BFB realized that a visual analysis had not been conducted (analysis that should have been conducted at the time that the sample was collected), BFB asked to have any remaining sample returned from the laboratory. The visual analysis was then conducted by BFB on 08/13/2014 (see "2008 MSGP Quarterly Visual Inspection" form in Attachment B). **Note**: BFB reports that the only stormwater discharge from the site was the 03/20/2014 discharge at Outfall #2.

6) **Quarterly Visual Assessment Documentation**: During my evening review of the BFB SWPPP, I noted that page 13 of the SWPPP referred to the inclusion of a "Visual Assessment Form" (to be used for documenting the quarterly visual assessments) in Appendix B of the SWPPP. There was no such form in Appendix B at the time of this inspection (referring to Appendix B of the BFB SWPPP, **not** Attachment B associated with this inspection report).

7) **Corrective Action Log**: During the course of this inspection, I noted a reference to the repair of a silt fence in the corrective action log. I could not find any mention of a silt fence requiring repair during my review of the routine facility inspection reports. In his October 23, 2014 follow-up letter, Mr. Vranes explained that the damage to the silt fence was discovered by the mine contractor and reported to the BFB staff. Since it was not discovered during one of the routine facility inspections, it did not show up on the inspection reports although the repair was recorded in the corrective action log. My initial concerns, expressed during the closing conference, appear to have been addressed.

8) **SWPPP - Site Description and Site Map**: Part 5.1.2 of the MSGP establishes a requirement to include a site map as part of the site description in the SWPPP. In addition to other features, the site map must identify the "…locations of all existing structural control measures…". At some point during the construction phase of the BFB mine, BFB had installed a collection sump, culverts, and a rock-lined channel to convey stormwater from the north-south haul road bisecting the central portion of the site, around the northern perimeter of the EOP, and into EP-1 (see Photos 23-25 and 29). This structural control was not shown on the site map at the time of this inspection. In his October 23, 2014 response letter, Mr. Vranes indicated that this feature was added to the map on 10/15/2014.

IX. Closing Conference

As noted previously, I took a copy of the SWPPP with me to review later that evening. The next morning, I drove back to the BFB mine to complete the inspection. I arrived at the office at 8:00 am. Mr. Crowther (IDEQ) joined me there a short time later. P4 Business Unit Lead Randy Vranes, who had been unable to join us for the inspection on the previous day, was also present for the closing conference along with Ms. Roskelley and Mr. Hendricks.

I provided Mr. Vranes with a summary of the activities from the previous day. I then summarized of the areas of concern I had noted during the course of the inspection (as outlined in Section VIII above). We did discuss the signature authorization and the inspection forms certification issues. The P4 staff claimed that their attorney had reviewed the MSGP and determined that the current signature authorization was sufficient and that the certification statement was only required on the Annual Report, not the Routine Facility Inspections or the Quarterly Visual Assessments. I explained that I would seek further clarification on this issue.

Upon completion of this inspection, Mr. Crowther and I, along with Ms. Roskelley and Mr. Hendricks, would be traveling approximately 10 miles up the road to conduct an inspection at P4's South Rasmussen mine. Since Mr. Vranes would not be able to join us on that inspection, I thanked him for his time and assistance before leaving the BFB site at 9:00 am.

P4 Production, LLC.
Blackfoot Bridge Mine
Report Completion Date: 12/01/2014

Inspector:

Patrick Stoll, EPA/R10/IOO
Lead Inspector

Attachment A
Photo Log

P4 Production, LLC./Blackfoot Bridge Mine Photo Log
September 23, 2014

Inspection site or facility name:	P4 Production, LLC./Blackfoot Bridge (a subsidiary of the Monsanto Company)
Physical Location:	3268 Blackfoot River Road Soda Springs, Idaho 83276
NPDES ID #:	Tracking # IDR05CR88
Type of Inspection:	MSGP Stormwater Compliance Evaluation Inspection
Date of Inspection:	September 23, 2014
Inspector(s):	Patrick Stoll, EPA/R10/OCE/IEMU/IOO
Image capture device:	Panasonic Lumix DMC-TS4
Original file type, pixel dimensions, and file #s, (assigned by camera):	JPG; 4000 x 3000 pixels; Image numbers P1000703-P1000758
Photo Log Image ID #s:	Images numbered: 1-34
Digital images recorded by:	Patrick Stoll unless otherwise noted
Drainage/flow direction:	

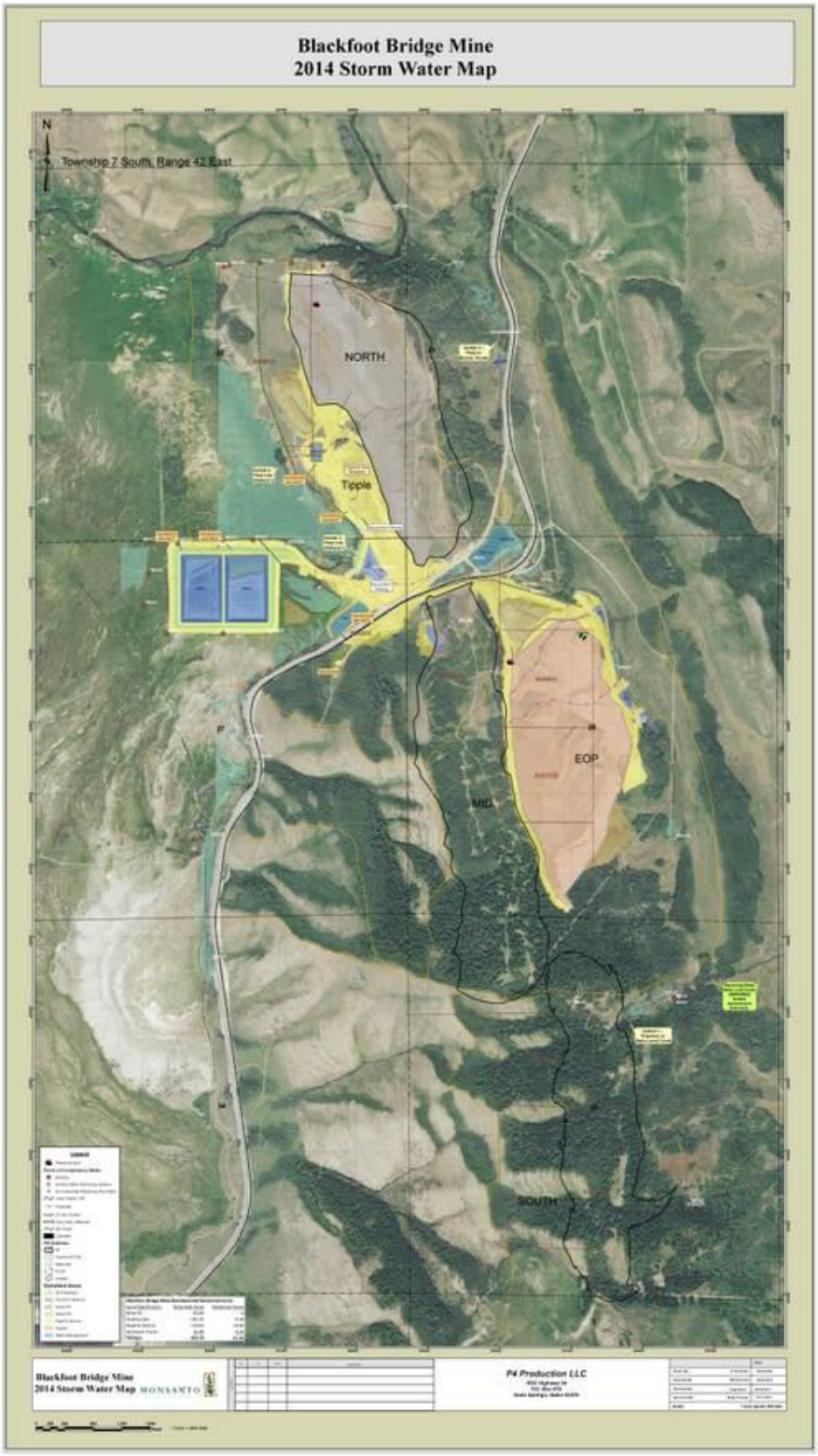

Photo No. 1 (Map provided by P4 BFB)
BFB 2014 Stormwater Map – Updated on 10/15/2014

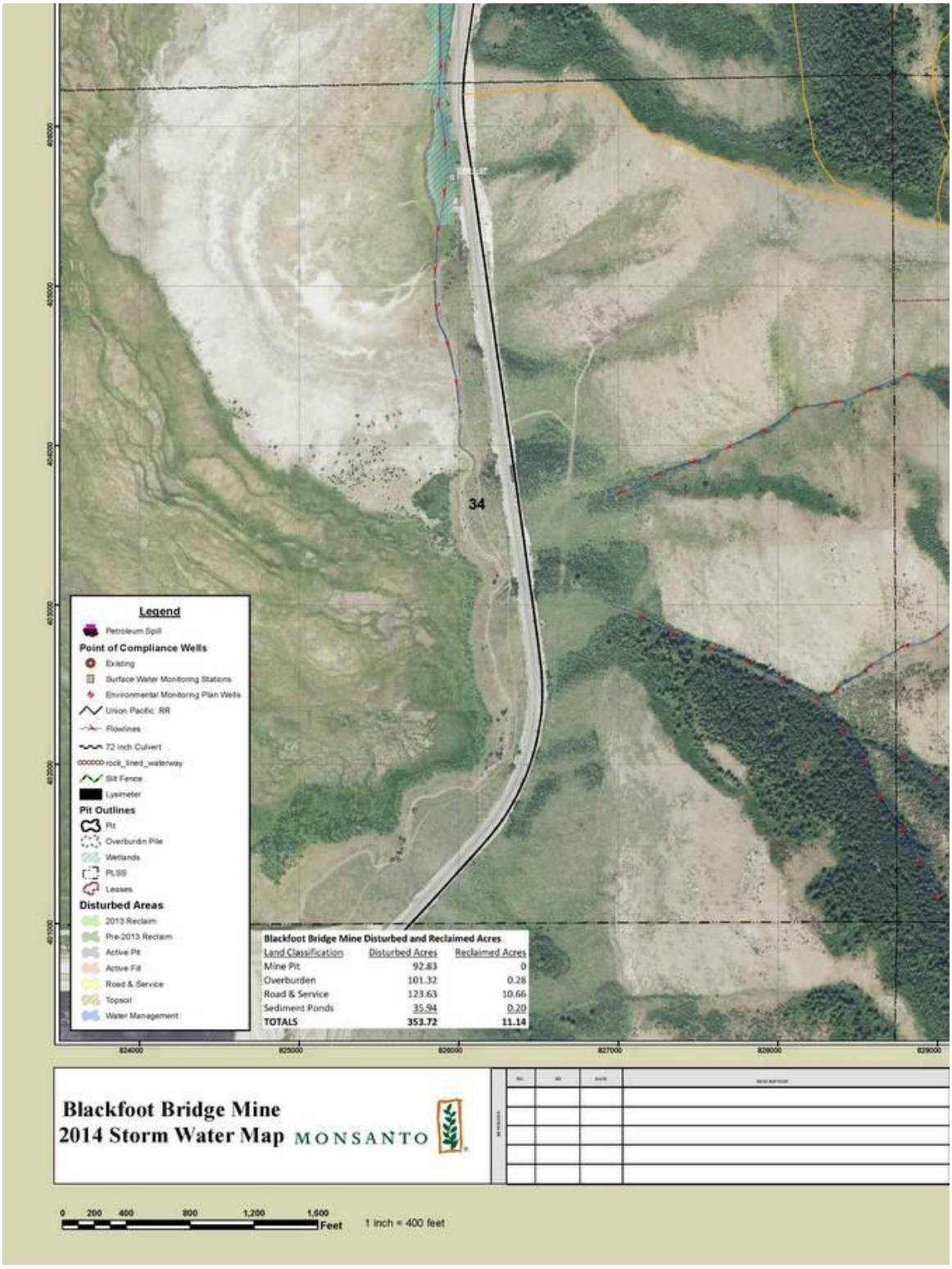

Photo No. 2 (Map provided by P4 BFB)
BFB 2014 Stormwater Map – Map Legend

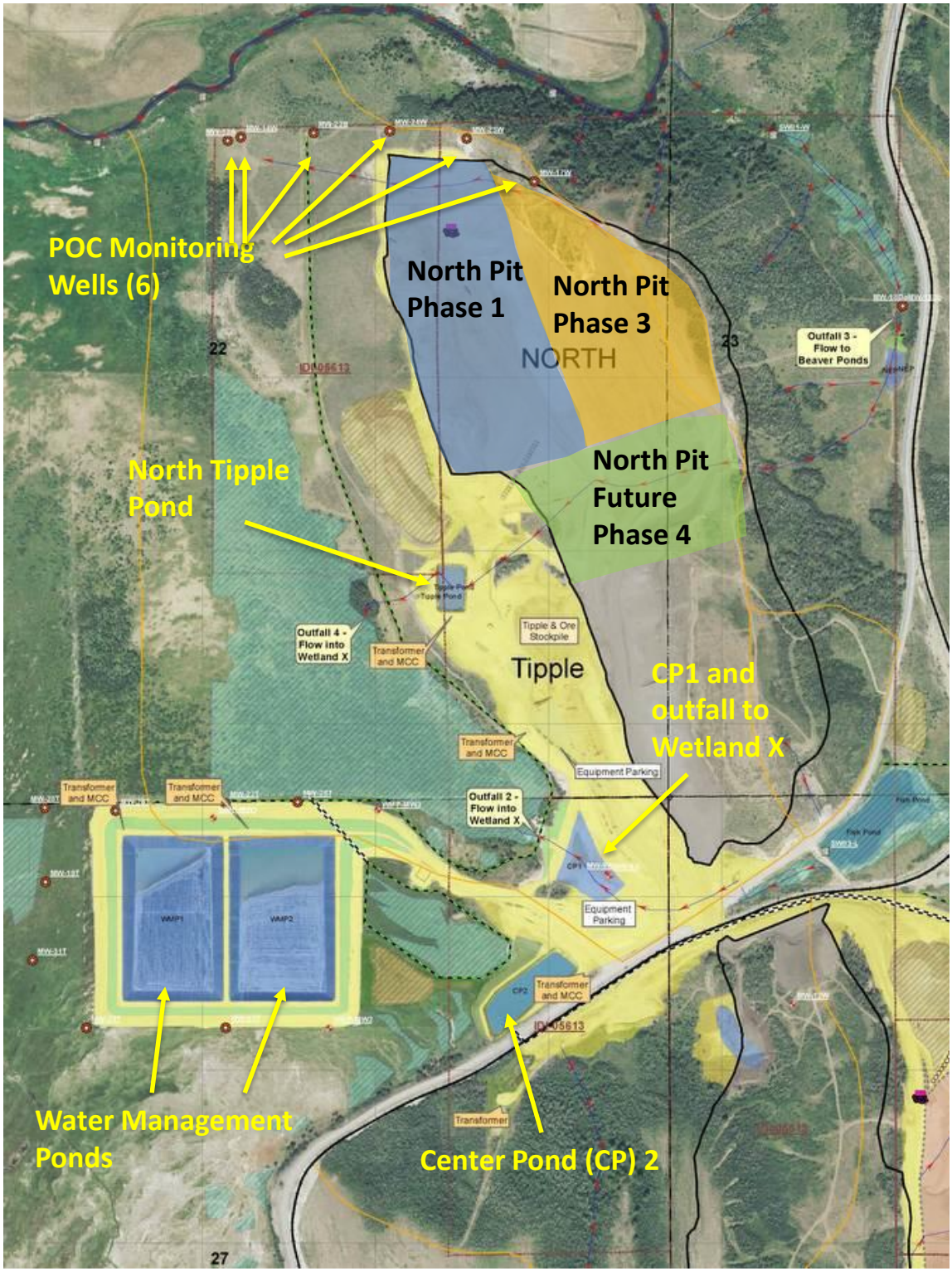

Photo No. 3 (Map provided by P4 BFB)
BFB 2014 Stormwater Map – North Pit and primary water management ponds

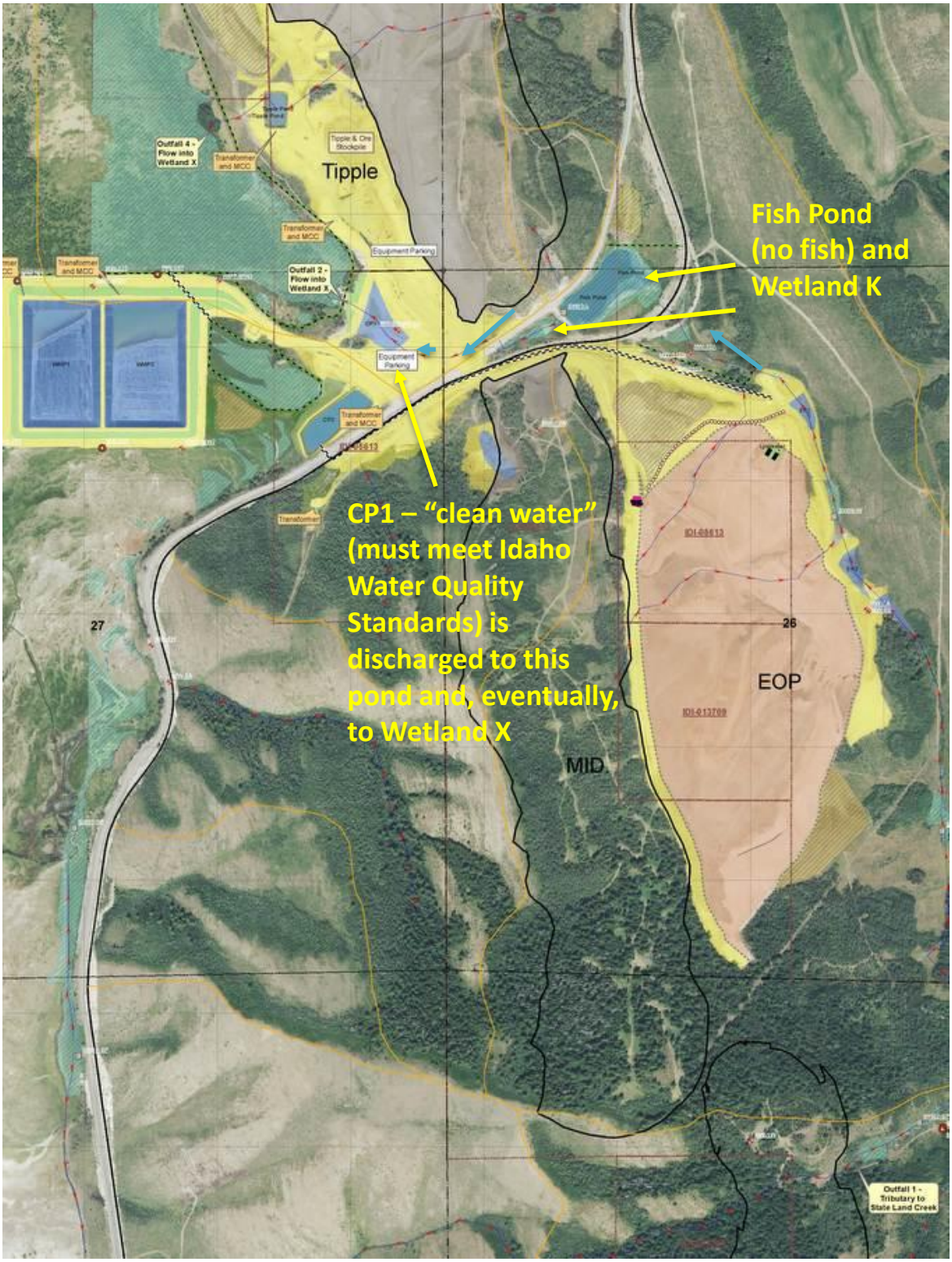

Photo No. 4 (Map provided by P4 BFB)
BFB 2014 Stormwater Map – southern half

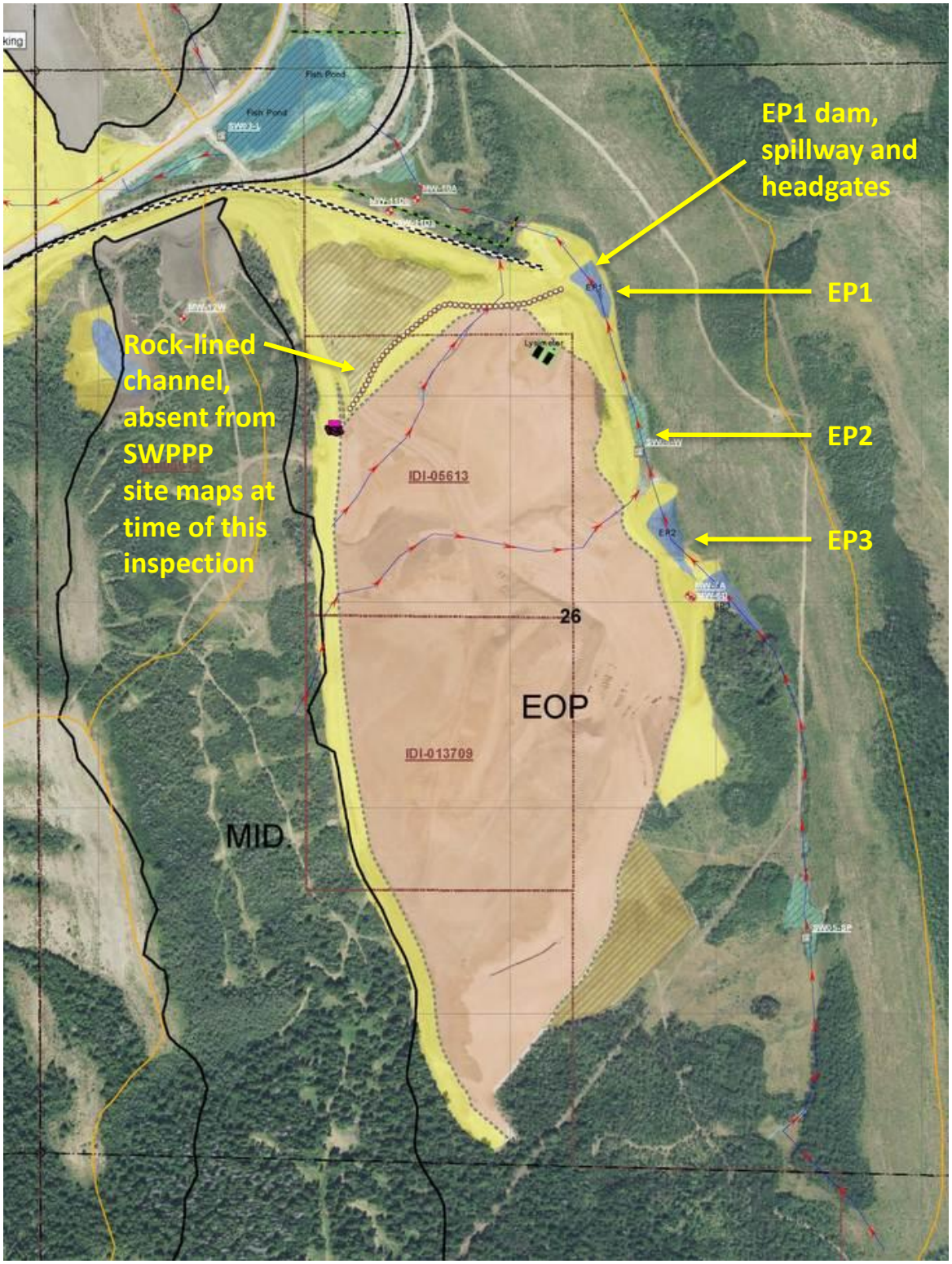

Photo No. 5 (Map provided by P4 BFB)
BFB 2014 Stormwater Map – External Overburden Pile (EOP) and East Ponds (EPs)

P4 Blackfoot Bridge Mine – Photo Log
MSGP Compliance Evaluation Inspection; September 23, 2014

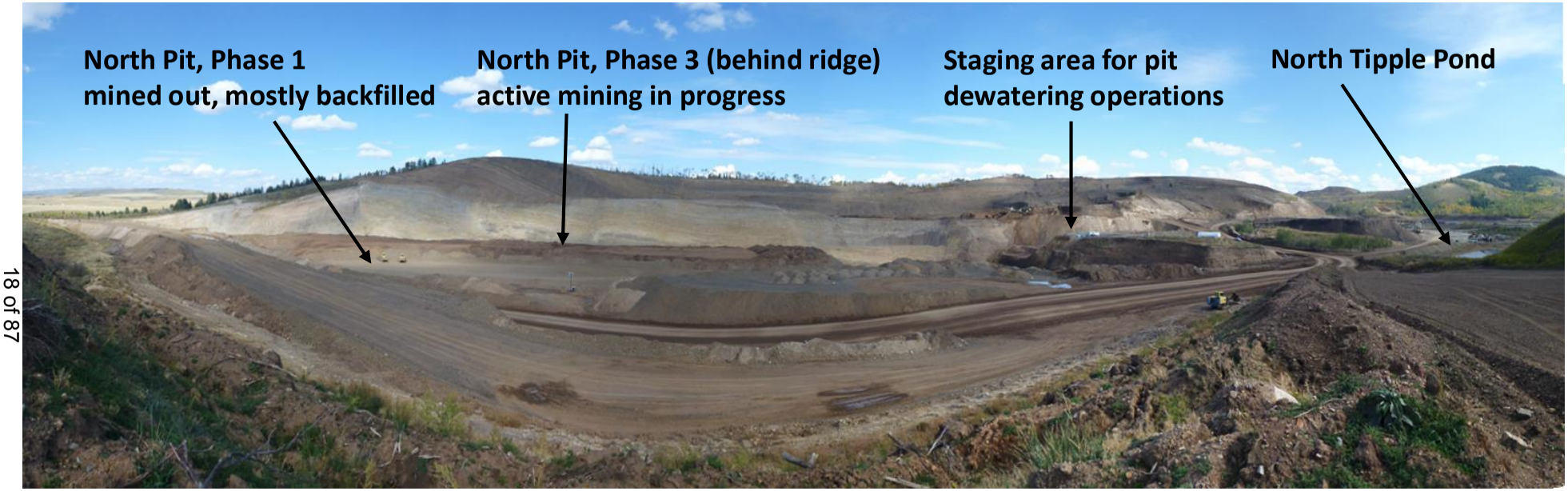

Photo No. 6 (panoramic; Photos P1000712-P1000721)
Facing east – current operations in the North Pit.

Photo No. 7 (P1000708)
Facing east across North Pit – the dewatering lines from bottom of Phase 1; equipment in background/upper left is staged at south end of Phase 3.

Photo No. 8 (P1000726)
Facing north – view into Phase 1 from the staging area for the dewatering/pumping equipment.

Photo No. 9 (P1000725)
Facing north – View into Phase 1 of North Pit. This phase has been mined out and backfilled except for a small basin used for dewatering at south end of Phase 1. .

Photo No. 10 (P1000723)
Facing north – these are the 4-6” HDPE pipes used to pump groundwater from the Phase 1groundwater basin to the North Tipple Pond.

Photo No. 11 (P1000724)
Facing west – the dewatering lines from Phase 1 to the North Tipple Pond.

Photo No. 12 (P1000722)
Facing northeast –the generators for the dewatering pumps.

Photo No. 13 (P1000707)
Facing north – inside Phase 3 of the North Pit.

Photo No. 14 (P1000706)
Facing south – the entryway into the North Pit, Phase 3.

Photo No. 15 (P1000727)
Facing north – the 4-6” HDPE lines from the pit dewatering operation come together at this manifold prior to discharge to the North Tipple Pond. .

Photo No. 16 (P1000728)
Facing northwest – the North Pit dewatering manifold with North Tipple Pond in the background; water discharges to the pond.

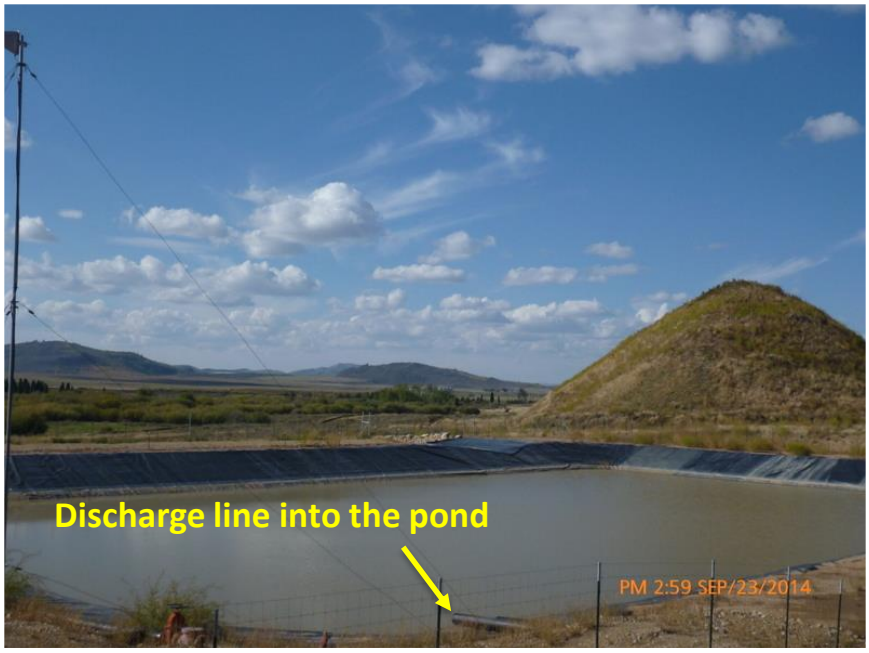

Photo No. 17 (P1000730)
Facing northwest – the lined North Tipple Pond (not discharging at time of this inspection).

Photo No. 18 (P1000729)
Facing southwest– pump and intake line from North Tipple Pond; delivers water to CP2.

Photo No. 19 (P1000737)
Facing southwest – CP2 receives water from North Tipple Pond and other locations around the site that are known or expected to exceed Idaho Water Quality Standards (IWQSs).

Photo No. 20 (P1000738)
Facing northeast – these 3 HDPE lines are used to pump water from CP2 to Water Management Pond 1 or 2.

Photo No. 21 (P1000739)
Facing southeast – evaporator canons ("*Landsharks*") are located along the west side of each of the water management ponds. The evaporators will not function when the wind direction is likely to cause off-site drift. Water balance could be a potential issue under certain conditions.

Photo No. 22 (P1000732)
Facing northeast – this tipple is located midway along the west side of the North Pit.

Photo No. 23 (P1000745)
Facing southwest – this is the upper portion of the rock-lined channel that was built to convey stormwater and snowmelt from the area above the Mid Pit/East Overburden Pile (EOP) haul road to the East Pond (EP) 1. The structure did not appear on the SWPPP site map at the time of this inspection.

Photo No. 24 (P1000742)
Facing southeast – another view of the haul road stormwater channel with the EOP in the background.

Photo No. 25 (P1000744)
Facing East Southeast – this is the lower end of the haul road stormwater channel (see Photos 23-24) near point of discharge into EP1 (no standing water in EP1 at the time of this inspection).

Photo No. 26 (P1000746)
Facing northeast – looking down from near the top of the EOP into the East Ponds drainage. Liners and wattles are used to prevent infiltration and erosion.

Photo No. 27 (P1000748)
Facing east – view from near the top of the EOP; EP2 and EP3 dam and spillway is visible in the drainage below.

Photo No. 28 (P1000751)
Facing south – the view toward the south end of the EOP.

Photo No. 29 (P1000754)
Facing southeast – the rock-lined haul road stormwater channel noted in Photos 23-25 discharge into EP1 at this location above the dam.

Photo No. 30 (P1000752)
Facing north – These are the headgates at the top of the EP1 spillway. Clean water (water that meets the IWQSs) is discharged via either of the 2 gates on the right-hand side. Water the does not meet the IWQSs is discharged to CP2 via one of the two gates on the left.

Photo No. 31 (P1000756)
Facing northwest – from the top of spillway it is easy to see the two directions for stormwater discharge from EP1; “clean” water is discharged into the rock-lined channel on the right, into Fish Pond and Wetland K, en route to CP1; the concrete channel conveys “dirty” water to large culvert leading directly to CP2.

Photo No. 32 (P1000735)
Facing west – CP1 and the spillway to Wetland X; structural failure (since repaired) during the first significant report of stormwater to the pond in March of 2013 led to the discharge of some sediment to Wetland X.

Photo No. 33 (P1000736)
Facing west – close-up view of CP1 and the spillway to Wetland X.

Photo No. 34 (P1000757)
Facing west – stormwater collection pond in "beaver pond" area on the east side of the North Pit. According to the BFB staff, stormwater runoff entering this pond would not come into contact with any disturbed soil.

Attachment B
Facility Documents and P4 Response to Concerns

P4 PRODUCTION, L.L.C.

SIGNATORY AUTHORIZATION
FOR P4 PRODUCTION MINING AND RELATED OPERATIONS
PERMIT PROGRAM DOCUMENTS

1. **DELEGATIONS:** The individual occupying the position noted below is duly authorized to execute documents required by, or prepared pursuant to, federal, state and local laws and regulations relating to mineral exploration, mining operations, and real property management on behalf of P4 Production, L.L.C. with regard to P4 Production operations located in the United States, except as limited below.

2. **TO WHOM DELEGATED:**

   Business Unit Lead, Mineral Activities

3. **LIMITATIONS:** The above delegates are authorized to sign permit applications, reports, variance requests, special agreements, compliance orders and information request responses with advice of counsel from the Environmental Law Group and after consultation with the Director, Environment, Safety and Health, or such Director's designee.

4. **REDELEGATION AUTHORITY:** None

P4 PRODUCTION, L.L.C.

By _____
Roger W. Gibson, V.P. Operations

Date 7-7-14

Storm Water Pollution Prevention Plan
Winter Inspection of Blackfoot Bridge

Year: **2014** Month: **March**

Date: **Monday the 31st** Time: **11:05a**

Weather / ground conditions (temperature, snow depth, date of most recent runoff, etc...)

The Outfall 1 (Tributary to State Land Creek at the Blackfoot Bridge property was inaccessible during the monthly inspection due to winter weather conditions and snow depths. Outfall 2 at CP1 (Central Pond 1) is being tested for TSS, Turbidity, and Selenium, and is being allowed to slowly flow from the trickle pipe when results are clean. The NEP (Northeast Pond) at Outfall 3 is not full or going through the spillway, so there have been no discharges for the month. The average temperature for the month was 32.82°F, which indicates that precipitation has fallen as snow, but it is slowing melting and will be closely monitored during the spring thaw.

Name of inspectors: _____ (Michael Vice, Reclamation Specialist)

_____ (Justin Skinner, Environmental Supervisor)

This log will be kept with the monthly inspection forms. All records will be kept on file with the SWPPP for a minimum of three years after the NPDES permit under which discharges are authorized expires or authorization is terminated. All deficiencies found during this inspection will be corrected within 14 days or before the next storm event.

2008 MSGP Quarterly Visual Inspection

Site: ___Blackfoot Bridge Mine_____ **Outfall:** __CP1 to Wetland X (Outfall 2)____

Date/time: _____8/13/2014_____ **Inspector:** ____Molly Prickett_____

Discharge date: ___3/20/2014 (Q1)_____ **Sample location:** ___CP1 Pond_____

Time discharge began: ___approx 8:15am_____ **Sample time:**_____8:05am_____

Nature of discharge (runoff; snowmelt; allowed release): Allowed release; see Pace report #10260185

If sample not taken within first 30 minutes of discharge, list the reason why: The sample was taken during the discharge, but not from the outlet pipe. It was taken from the pond right before or during the discharge. It was realized in the summer of 2014 that the quarterly visual inspection was not completed. Sample volumes were delivered from the lab and a visual inspection was completed.

Pace Project #10260132, Sample #10260132001
- Not in designated sampling quarter -

Color	None
Odor	None
Clarity	Clear
Floating Solids	None
Settled Solids	Some sandy looking settled solids (very little)
Suspended Solids	Very little
Foam	None
Oil Sheen	None
Other indicators of pollution	None
Possible sources of pollution	N/A

From 2008 MSGP, page 21-22

Signature: Molly Prickett Date: 8/13/14

Keep on file in SWPPP for at least 3 years

P_4 Production, LLC

Soda Springs Plant
1853 Highway 34
P.O. Box 816
Soda Springs, Idaho 83276-0816
Phone: (208) 547-4300
Fax: (208) 547-3312

October 23, 2014

Mr. Patrick Stoll
Multi Media Inspector

RE: Preliminary Response to September 23, 2014 EPA Stormwater Inspection

Dear Mr. Stoll:

Enclosed is a preliminary response to the items discussed during the September 23, 2014 EPA Stormwater Inspection at the Blackfoot Bridge Mine.

If you have any questions regarding this report, please contact me at 208.547.1442 or randy.k.vranes@monsanto.com or Molly Prickett at 208.547.1395 or molly.prickett@monsanto.com.

Sincerely,

Randy Vranes
Business Unit Lead, Mineral Operations

RKV/mp

Enclosue

Preliminary Response to September 23, 2014 EPA Stormwater Inspection

1. Delegation of Authority

It was noted during the inspection that Mr. Stoll felt that the delegation of authority should extend further down from the Business Unit Lead Role and without it, he did not feel that the stormwater team members were authorized to conduct inspections, sign documentation, etc.

40 CFR 122.22(b) states that:

> (b) All reports required by permits, and other information requested by the Director shall be signed by a person described in paragraph (a) of this section, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
> (1) The authorization is made in writing by a person described in paragraph (a) of this section;
> (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company, (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) and,
> (3) The written authorization is submitted to the Director.

Because 40 CFR 122.22(b) discusses "all *reports* required by permits", P4 does not believe that this language extends to inspections which are filed internally (including monthly stormwater inspections). Therefore, delegation of authority meeting the requirements in 40 CFR 122.22(b) is not necessary for employees conducting and signing SWPPP stormwater inspections. Furthermore, not all members of the SWPP team would qualify as a duly authorized representative under 40 CFR 122.22(b)(2) (not responsible for the overall operation of the facility, an operator of a well or well field, superintendent, or having overall responsibility for environmental matters for the company).

2. Certifying Language – Inspection Forms

Mr. Stoll was concerned that the inspection forms did not include the certifying language specified in the MSGP and that Mr. Vice was not qualified to complete the inspection because the DOA did not provide for it.

During the inspection, Ms. Roskelley pointed out that Appendix B, Subsection 11.E states that "any person signing documents in accordance with Appendix B, Subsections 11.A or 11.B above must include the following certification…" Monthly stormwater

parts do not fit into the categories of documents specified in Subsections 11.A or 11.B. Additionally, 40 CFR 122.22(d) clearly demonstrates that certifying language is not required for the inspection forms.

3. Qualifying Event Inspections

It was noted during the inspection that it is unclear how the "qualifying event" inspections are triggered.

P4 uses this term to describe internally-triggered inspections which help to ensure that we are complying with Sections 4.2 and 6.1.3 of the 2008 Multi-Sector General Permit (MSGP). If there is over 0.5" of rain within 24 hours, a "qualifying event" inspection will be conducted.

P4 has a weather station at Blackfoot Bridge which sends data electronically to a weather data software program. This data is monitored closely by the member of the SWPPP team who is responsible for monthly and "qualifying event" inspections. If over half an inch of precipitation has occurred within 24 hours, an email notification is sent to members of the SWPPP team indicating that additional actions (i.e. inspection) may be required.

This has been clarified in the Blackfoot Bridge SWPPP. Please see an excerpt from the updated SWPPP in Attachment 1 (additions are in blue text).

4. SWPPP Team Training

Mr. Stoll noted that the SWPPP team receives the same level of training as the entire workforce. Mr. Stoll was concerned that the training received was not detailed enough that the SWPPP team members could be considered qualified and that training should specifically address each role's responsibility. He referred to the definition of qualified personnel in Appendix A.

The definition of "qualified personnel" in Appendix A of the 2008 MSGP is as follows:

> Qualified Personnel – Qualified Personnel are those who possess the knowledge and skills to assess conditions and activities that could impact stormwater quality at your facility, and who can also evaluate the effectiveness of control measures.

P4 believes that the stormwater inspections at the mine are conducted by (an) employee(s) who meets this definition. The annual training provided to all employees meets the training requirements listed in Section 2.1.2.9.

However, P4 believes position-specific training would be a best management practice and intends on developing position-specific training for the Pollution Prevention Team in the future.

5. Standard Operating Procedure – Quarterly Visual Inspection

Mr. Stoll noted that there was no Standard Operating Procedure for MSGP-required quarterly visual inspections.

P4 has developed a Standard Operating Procedure specifically for the required quarterly visual observations. Please find a copy of this SOP in Attachment 2.

6. Quarterly Visual Observations

Mr. Stoll noted that the visual observations on discharges were not conducted in the timeline required by the MSGP. He noted that some elements, such as odor, may not be detectable after a period of time.

P4 understands that this 2008 MSGP requirement was overlooked in 2014. Quarterly visual inspections will be completed correctly in 2015, using the SOP referenced in Item #5.

7. Corrective Action Log

Mr. Stoll noted there was a corrective action listed on the site corrective action register, but that the issue was not noted in the corresponding monthly inspection.

The item found on the Blackfoot Bridge Corrective Action Log (silt fence needing repair dated March 14, 2014) was not found during a monthly stormwater inspection. It was found by another member of the SWPPP team while she was at Blackfoot Bridge Mine. It is a Best Management Practice at the Blackfoot Bridge Mine for all employees to be aware of stormwater BMPs and to report any problems to a member of the SWPPP team.

The need for silt fence repair was noted on the log to ensure that it was taken care of in a timely manner. The photos were in the following folder at the time of the inspection:

G:\MINE\Environmental Records\Stormwater\BFB Stormwater NPDES\SWPPP\Appendices\BMP Maintenance Log\140314_silt fence 1.jpg

…\140314_silt fence 1.jpg
…\140401 Silt Fence Wetland X.jpg
…\140401 Silt Fence Wetland X_2.jpg

Hard copies of the photos have been placed in the Blackfoot Bridge SWPPP to avoid confusion. Please see "before" and "after" photos in Attachment 3.

8. Stormwater Map

Mr. Stoll noted that a BMP observed in the field (rock-lined channel from Mid-Seg Road to EP-1) was not on the stormwater map.

The Blackfoot Bridge SWPPP Stormwater Map was updated on October 15, 2014 to display the rock-lined channel between the Mid-Seg Road and EP-1. Please see Attachment 4.

Attachment 1 – Blackfoot Bridge SWPPP updates

From Section 3.6, Inspection Schedules and Procedures

Quarterly Visual Assessments

Visual assessments of stormwater discharge are conducted quarterly in conformance with Section 4.2.1 of the 2008 MSGP and the Standard Operating Procedure found in Attachment B. During a discharge, the P4 Reclamation Specialist or other designated individual, collects a grab sample of the discharge from each outfall and assesses the sample(s) for water quality characteristics indicative of stormwater pollution (i.e. color, odor, clarity, solids, oil sheen, etc). Observations are recorded on the Visual Assessment Form (Attachment B). Samples must be collected within 30 minutes of an actual storm event causing discharge. If this is not possible, the sample must be collected as soon as practicable and the reason for the delay must be documented on the assessment form.

Four quarterly visual assessments must be conducted each year. Discharges are expected to occur only during the spring runoff season; therefore all four assessments must be conducted during this period. If no discharges occur during the spring or thereafter, quarterly visual assessment forms will be completed by noting the absence of a discharge or the lack of discharge will be noted in the monthly inspections.

Recognized deficiencies found during the visual inspection will be documented within 24 hours and corrected as soon as practicable, but no later than 14 days after the conclusion of the inspection. Results of each inspection and associated corrective action forms, if any, will be signed by the inspector and kept in the same file as this plan for a minimum of three years after the expiration or termination of coverage under the 2008 MSGP.

Qualifying Event Inspections

Inspections of all outfalls are conducted in response to all qualifying storm events. Storm events separated by at least 72 hours are considered separate events. If during the qualifying event inspection a discharge is discovered, all applicable monitoring requirements will apply (see Section 3.5).
A “measureable” or “qualifying storm event” is internally defined as a storm which generates more than half an inch (0.5”) of rain within a 24 hour period. The amount of precipitation is measured at the Blackfoot Bridge weather station. Weather data is electronically transmitted to weather data software which can be remotely accessed. Email alerts are sent to the SWPPP team that additional actions may be required (i.e. inspections). Qualifying inspections are conducted to ensure that no permitted outfalls are discharging and that all monitoring obligations are met.

Attachment 2 – Quarterly Visual Assessment Standard Operating Procedure

1.0 SCOPE AND APPLICATION

This method will be used to conduct sampling for quarterly visual discharge monitoring at P4 Production, LLC's mines. Use of this Standard Operating Procedure will decrease variation in visual assessments and will increase data quality. Accurate records shall be kept and available for review and in the case that an internal audit or third party inspection occur. All electronic records for quarterly visual observations will be kept in G:\MINE\Environmental Records\Stormwater.

2.0 METHOD SUMMARY

As required by the 2008 MSGP, four quarterly visual discharge assessments must be completed at each mine site every year (if there are discharges). There are various "designated sampling quarters" at each mine site. Please see the site's specific Stormwater Pollution Prevention Plan for details. This SOP complies with Part 4.2 of the 2008 MSGP, "Quarterly Visual Assessment of Stormwater Discharges".

3.0 DEFINITIONS

2008 MSGP: EPA's Multi-sector General Permit, which regulates the stormwater at P4's mines

4.0 EQUIPMENT

Empty & unused glass or plastic sampling container (250 – 1000 mL)

Watch

Blank Quarterly Visual Assessment Form (see Attachment 1)
Kept in G:\MINE\Environmental Records\Stormwater\Forms\2008 MSGP Quarterly Visual Assessment.

5.0 PROCEDURE

5.1 During a stormwater discharge or a planned, allowable discharge, collect a sample of the discharge within the first 30 minutes of the discharge. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and you must document why it was not possible to take samples within the first 30 minutes.

5.1.1 For storm events, the discharge must be occurring at least 72 hours (3 days) from the previous discharge. The 72-hour storm interval does not apply if you document that less than a 72-hour period interval is representative for local storm events during the sampling period (see site-specific SWPPP).

5.2 After the sample is collected, conduct the visual inspection on the sample and fill out the Quarterly Visual Inspection.

6.0 DATA RECORDING

6.1 File the completed Inspection form in the following locations:

6.1.1 Hard Copy – SWPPP binder (Must be kept for three years.)

6.1.2 *G:\MINE\Environmental Records\Stormwater\... \SWPPP\Appendices\Quarterly Visual Assessments*

6.2 Log the Inspection in the Quarterly Visual Assessment Log:

G:\MINE\Environmental Records\Stormwater\Forms\2008 MSGP Quarterly Assessment Log

Attachment C
Revised Adaptive Management Plan
for
Water Management System
P4 Production , LLC.
Blackfoot Bridge Project, Idaho

REVISED ADAPTIVE MANAGEMENT PLAN
FOR
WATER MANAGEMENT SYSTEM
P4 PRODUCTION, LLC
BLACKFOOT BRIDGE PROJECT, IDAHO

Prepared for:

P4 Production, LLC
PO Box 816
Soda Springs, Idaho 83276

Prepared by:

AMEC Environment & Infrastructure
1001 South Higgins Avenue, B-1
Missoula, Montana USA 59801

September 2012

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1.0 INTRODUCTION AND BACKGROUND

P4 Production, LLC (P4), in consultation with the U.S. Army Corps of Engineers (Corps) and U.S. Bureau of Land Management (BLM), developed this Adaptive Management Plan (AMP) for implementation of the Water Management System for P4' s Blackfoot Bridge Project. The AMP has been developed in response to comments received by the Corps on the Public Notice of Application for Permit (NWW No. 043200012) and the Blackfoot Bridge Mine Draft EIS (BLM 2009). The Blackfoot Bridge Mine Project, an open pit phosphate mine, is located approximately 10 miles north of Soda Springs, Idaho (Figure 1).

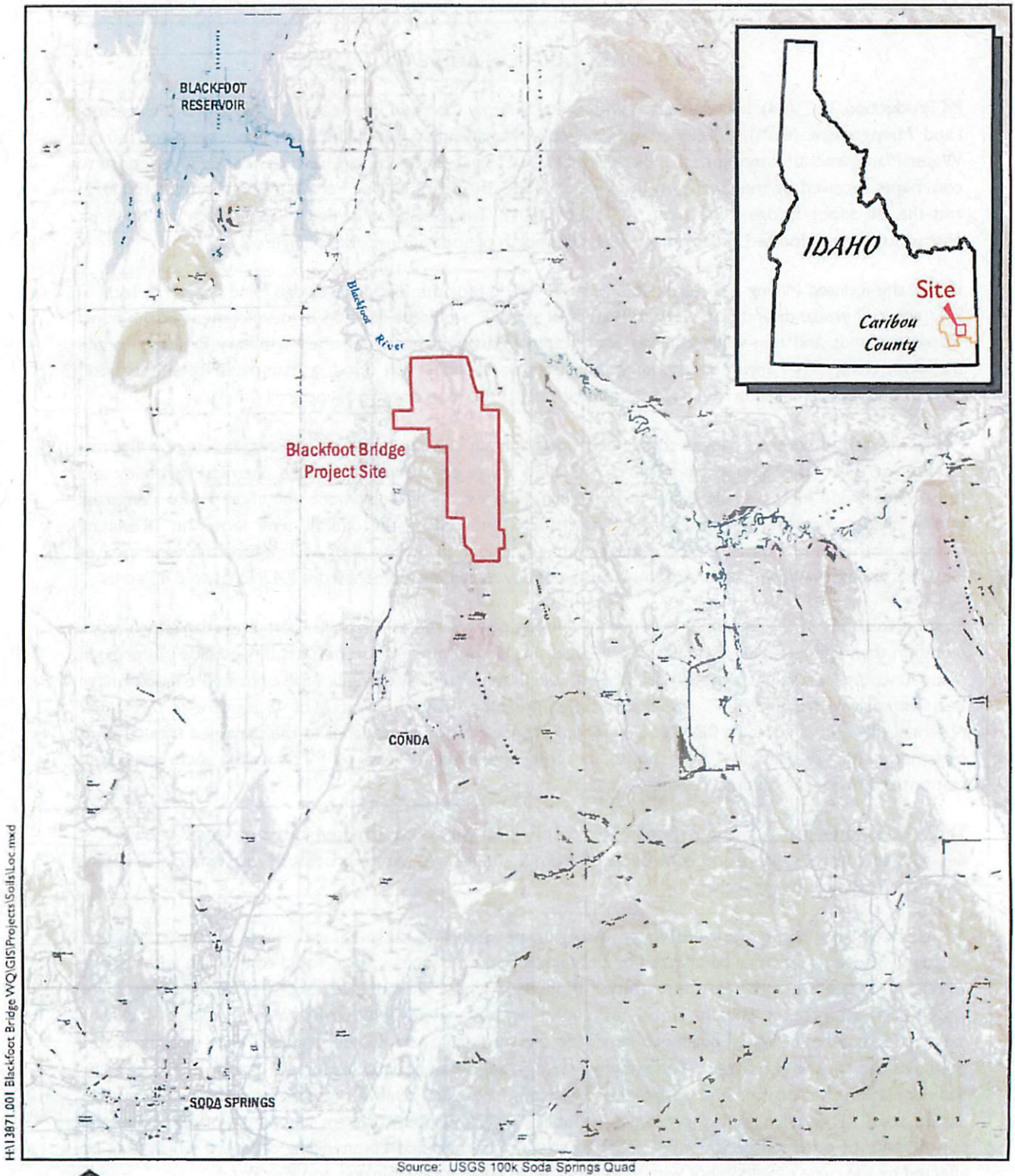
Under the Revised Mining and Reclamation Plan (P4 2011) for the Blackfoot Bridge Mine Project, a total of 9.43 acres of wetlands and non-wetland waters of the U.S. would be affected by development of the mine. These wetlands and non-wetland areas are located in an ephemeral unnamed tributary drainage to the Blackfoot River. This unnamed tributary drainage also includes Fish Pond, a man-made retention pond located between an existing haul road and railroad bed. Fish Pond does not support a fishery.

P4 has proposed several changes to planned operations at the mine due to the installation of a thermal oxidizer at their Soda Springs plant, which will allow usage of ore with increased chemical variability and thus will provide increased flexibility in the mining process. The equipment will allow P4 to compress mining phases, increase the percentage of pit backfill, and reduce the overall mine footprint. Resulting changes in the mine's water management system (described in Section 4.0), will reduce the total area of wetlands and non-wetland waters of the U.S. affected by mine development from 9.43 acres to 8.43 acres.

Existing wetlands in the unnamed tributary have been categorized as Class III. Class III wetlands are more common than Class I or II wetlands and are often smaller and more isolated. Class III wetlands can provide many functions and values although are not typically highly rated. Wetlands in the unnamed tributary have been extensively trampled by livestock and have an ecological function rating of 45 percent of their total potential (JBR 2003, 2006; P4 2008b). Connecting channels between wetlands in the unnamed tributary are ephemeral and normally flow in response to spring snowmelt for two to three weeks each year or in response to major precipitation events.

The mine's water management system, a portion of which will be constructed in the unnamed tributary, is designed to control capture and control runoff from the mine area and to protect off-site water quality that may be affected by mining activity.

As indicated above, the site-wide water management system is designed to control water (runoff and seepage) whose quality may be affected by the mining operation and as such, could commingle with surface water and groundwater within the unnamed tributary drainage. The objectives of the water management system are to protect aquatic resources and minimize any adverse environmental impact, including maintaining control of water quality to maximize the water that can be reintroduced back into the water shed and the aquatic ecosystem. Topography, geology, and lease boundaries for the Blackfoot Bridge Mine pose limitations for location and design of project components to achieve these water management system design goals. These limitations preclude the ability to completely prevent discharge of sediment and constituents of potential concern (COPCs) to stream channels and commingling of water which may be affected by the mine development with water located in ephemeral drainages and Fish Pond.



General Location Map
Blackfoot Bridge
Caribou County, Idaho
FIGURE 1

Under an approved 404 Permit Application (P4 2008b) for the Proposed Action at the Blackfoot Bridge Mine, P4 is authorized to discharge dredged or fill material into 9.43 acres of wetlands and non-wetland waters of the U.S. located within the permit boundary for the construction of the water management system. However, as previously discussed, planned changes to mine operations would reduce the area of wetlands and non-wetlands waters of the U.S. that may be affected by dredged or fill material to 8.43 acres. P4's development of the Blackfoot Bridge Mine will occur in sequences that include mine pit excavation, placement of overburden in an external overburden pile, placement of overburden as backfill in mined-out pits, and concurrent reclamation of overburden disposal areas upon completion. In recognition of the phases or sequence of mine development and implementation of site water management, the need to capture sediment, contain water whose quality has been affected by the mine, and/or the need for additional water management system storage capacity within specific wetlands and/or non-wetland waters of the U.S., P4 has designed the water management system to address the predicted volume of runoff water for each catchment area within the mine site.

This Revised AMP provides for implementation of management actions that will allow P4 to avoid or minimize the placement of fill and/or sediment in selected areas that currently contain wetlands and non-wetland waters of the U.S. unless prompted due to specific monitored conditions of concern.

2.0 OBJECTIVES

The objective of this Revised AMP is to accomplish the following goals:

- Implement the water management system with appropriate engineering controls to avoid or limit discharging dredged or fill material to selected areas currently containing wetlands and non-wetland waters of the U.S. unless necessary to manage site water.
- Protect the quality of off-site water by isolating and controlling on-site water as necessary.
- Maintain adequate water storage capacity within the water management system to meet project requirements[1].
- Provide for restoration of affected wetlands and non-wetland waters at closure of the Project.
- Establish criteria for implementation of water management actions included in this Revised AMP.

The preferred management action for site water associated with the Blackfoot Bridge Mine is to minimize discharge of dredged or fill materials to areas currently containing wetlands and non-wetland waters of the U.S., while maintaining control of sediment, COPCs, and water quality throughout the life of mine and post-closure period.

3.0 CONSULTATION

The original Adaptive Management Plan for water management for the Blackfoot Bridge Mine was developed in consultation with the Corps, BLM, and the Idaho Department of Environmental Quality (IDEQ).

[1] See Revised Water Management Plan (P4 2012a) and Water Balance Report (P4 2012b) for calculations of annual storm water volumes.

The Corps administers Section 404 of the Clean Water Act (33 USC 1344) which pertains to discharge of dredged or fill material into wetlands and non-wetland waters of the U.S. Applicants that propose to discharge dredged or fill materials to jurisdictional waters must first obtain a permit from the Corps.

IDEQ ensures conformance with state of Idaho water quality standards through its administration of Section 401 of the Clean Water Act. IDEQ must certify that a proposed project will not exceed surface water standards. IDEQ also regulates compliance with groundwater quality standards.

BLM is the surface management agency for public land included within the proposed Blackfoot Bridge Mine Project area. BLM also administers phosphate leases.

P4 has developed a site-wide Water Management Plan (P4 2012a) to control run-on water, runoff water, seepage water, and water that will be produced during occasional pit dewatering episodes. The water management plan has been modified as a consequence of the Revised Mining and Reclamation Plan and is described in this Revised AMP.

4.0 BLACKFOOT BRIDGE PROJECT – REVISED WATER MANAGEMENT PLAN

4.1 Pond and Water Conveyance Systems

The water management system and best management practices (BMPs) that will be employed during the Project have been designed to protect the quality of surface and subsurface water in and adjacent to the proposed Blackfoot Bridge Mine Project area. See Revised Water Management Plan (P4 2012a). The Revised Water Management Plan is designed with the intent to prevent discharge of impacted water and storm water runoff to the Blackfoot River. Water collected in the water management system that meets surface water quality criteria, however, may be discharged in accordance with requirements of the Storm Water Multi-Sector General Permit (MSGP) issued by U.S. Environmental Protection Agency (EPA) and/or an individual National Pollutant Discharge Elimination System (NPDES) permit, if required for the project by EPA. Monitoring and discharge requirements for release of waters to downstream wetlands are also found in the Water Management System and Storm Water Monitoring Plan of the Environmental Monitoring Program (Appendix D; P4 2012b). Water that does not meet surface water quality criteria will be stored and managed on-site.

Run-on diversion ditches will be used to intercept runoff from undisturbed areas and return the flow to the natural channels. Diversion of run-on water will reduce the volume of water that may report to the water management system. Run-on diversion ditches will be constructed near the southwest end of the Mid Pit, and along the south, west, and north sides of the South Pit (Figure 2).

A layout of water management facilities for the project is presented in Figure 2. Components of the water management system include two water management ponds (designated WMP1 and WMP2) to be constructed in the flat area west of the equipment yard and loadout area. The water management system will also include diversion ditches and pump/piping systems.

Under the Revised Water Management Plan, a total of seven water management ponds/dams will be constructed in drainages immediately adjacent to proposed disturbance areas. The original Water Management Plan included 11 water management ponds.

Three water management dams (EP1 through EP3) will be constructed along the unnamed tributary channel to the east of the East Overburden Pile (EOP) between current wetland areas within the drainage. The three EP pond dams will not be constructed in wetlands; however, the dams will cross over non-wetland waters of the US. (narrow channels between wetlands). When at full capacity, ponds that form behind each dam could pool into wetlands upstream of each EP dam in the unnamed tributary.

One water management pond (North Tipple Pond [NTP]) will be constructed west of the North Pit adjacent to the North Tipple. The NTP will replace the previous ponds NWP1/2 and NWP3/4 under this Revised Water Management Plan. NTP will not be located directly in Wetland X. The NTP pond will be lined because it will receive runoff that may potentially contact seleniferous material at the North Tipple.

Dam NEP1 will be constructed on the east side of the North Pit upstream of Wetland M to control sediment load in storm water runoff from the Beaver Pond drainage. Runoff in the Beaver Pond watershed will occur primarily from undisturbed land at the northeast limits of the project and will not come in contact with seleniferous material. P4 no longer intends to develop a topsoil stockpile in this drainage. Storm water BMPs (e.g., straw wattles and silt fencing) will be used in conjunction with sediment control dam NEP-1 to control the sediment load in runoff from the east side of the north pit during reclamation activities.

Dam CP1 will be the farthest downgradient pond in the unnamed tributary channel just upstream of Wetland X, and dam CP2 will be constructed in the vicinity of the proposed equipment yard and loadout area and will not discharge to waters of the U.S. Dam CP1 is designed to prevent release of water downstream to the Wetland X, if necessary, to ensure compliance with water quality standards. Under the original Water Management Plan, the capacity of Fish Pond (man-made retention pond) will be increased by enlarging the pond and raising the elevation of the dam and spillway by 5 feet. The dam will also be sealed in places to reduce potential leakage to Wetland L below Fish Pond. The capacity of Fish Pond will not change under this Revised Water Management Plan, unless additional storage capacity is needed in the EP and Fish Pond system (refer to Section 5.2.4 below for details). Water storage capacities of the water management ponds are provided in Table 1.

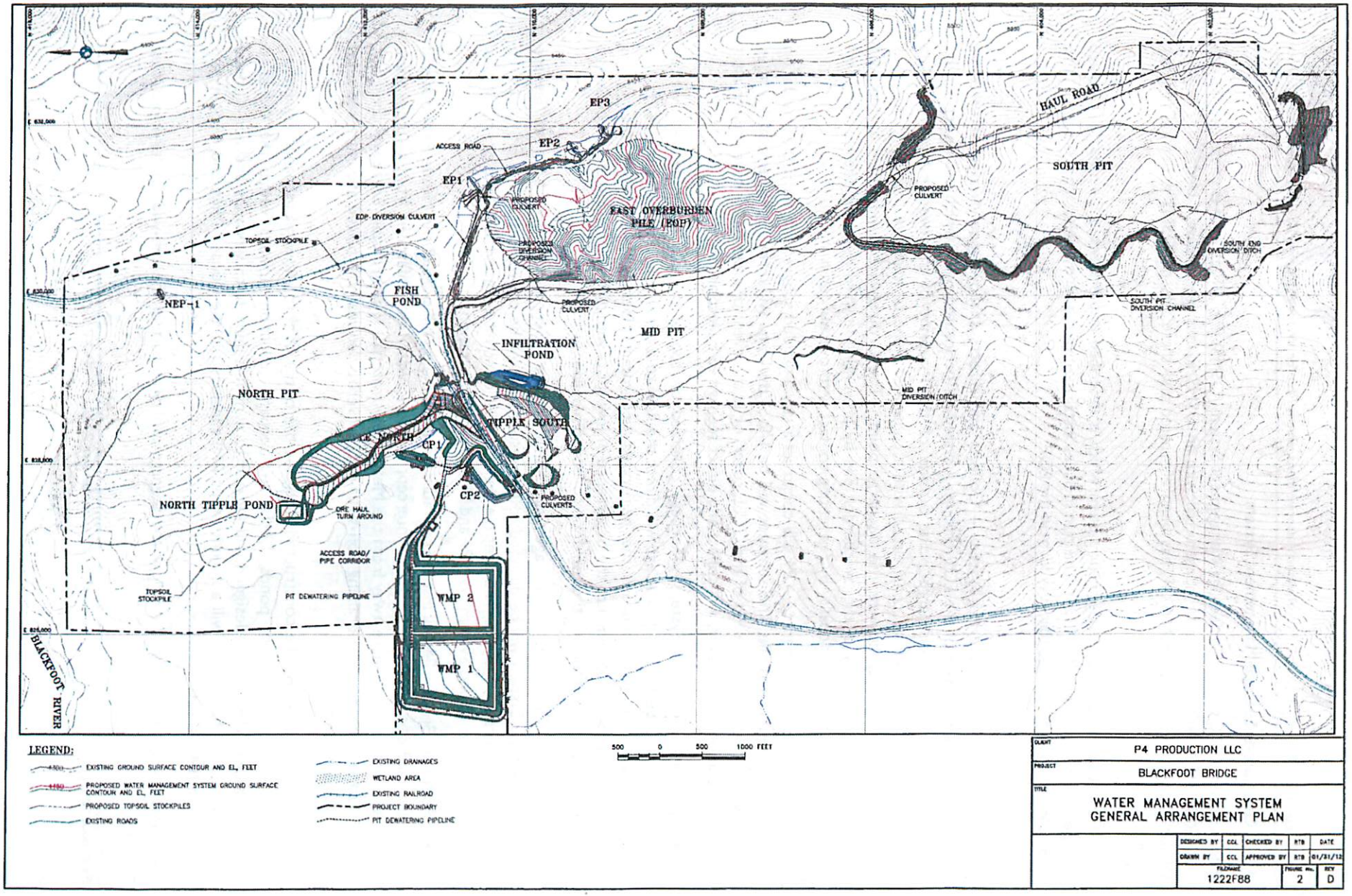
Periodic maintenance of sediment ponds will be required within the currently existing wetlands and non-wetland waters to ensure proper operation of the systems as well as to maintain capacity of the sediment ponds and flow of water. Maintenance will include repairing spillways and minimizing erosion, improving hydraulic sloping where needed, and removal of sediment in areas authorized by the Section 404 permit for the Project. P4 will monitor and maintain sediment pond facilities and remove sediment seasonally as needed to maintain pond capacities.

Water may be pumped from ponds NTP and CP1 to pond CP2 in a 12-inch diameter pipeline (Figure 2) with a pumping capacity of 1600-gallons per minute (gpm). Water pumped from the NTP pond will not be staged in pond CP1, which is unlined. Water stored in the EP ponds that does not meet discharge criteria will be conveyed to pond CP2 through the EOP diversion culvert (Figure 2). Water that is temporarily staged in pond CP2 will be pumped to the WMPs in a 12-inch diameter pipeline that has a conveyance capacity of 3,200-gpm. Refer to the Revised Water Management Plan (P4 2012a) for a detailed description of the water management system.

TABLE 1
Capacity of Water Management Ponds
Blackfoot Bridge Mine Project

Pond	Description	Capacity	
		Acre-feet	Million Gallons
WMP1	Storage pond for pit dewatering. May also receive runoff from EOP and NWOP.	252	82.3
WMP2	Storage pond for pit dewatering. May also receive runoff from EOP and NWOP.	252	82.1
CP1	Water management pond for equipment yard and loadout area. May also receive runoff from upper Unnamed Tributary drainage, including Fish Pond.	9.7	3.2
CP2	Water management pond for ore pad and tipple, and equipment yard and loadout area. May also receive runoff from EOP.	16.9	5.5
EP1	Water management pond in Unnamed Tributary (above Fish Pond).	8.8	2.9
EP2	Water management pond in Unnamed Tributary (above Fish Pond).	4.5	1.5
EP3	Water management pond in Unnamed Tributary (above Fish Pond).	2.8	0.9
NTP	Water management pond adjacent to North Tipple.	6.2[1]	2.0
NEP1	Water management in Beaver Pond watershed east of North Pit.	4.0[1]	1.3
Fish Pond	Existing pond. Will receive runoff from drainage north of diversion culvert. May also receive runoff from all of Unnamed Tributary.	21.8	7.1

Notes: [1] Preliminary estimate. Pond volume may change slightly based on final pond design.


EP3
EP2
EP1
ACCESS ROAD
HAUL ROAD
SOUTH PIT
PROPOSED CULVERT
EAST OVERBURDEN PILE (EOP)
EOP DIVERSION CULVERT
TOPSOIL STOCKPILE
SOUTH END DIVERSION DITCH
NEP-1
FISH POND
SOUTH PIT DIVERSION CHANNEL
MID PIT
INFILTRATION POND
NORTH PIT
TIPPLE SOUTH
TIPPLE NORTH
CP1
CP2
NORTH TIPPLE POND
ORE HAUL TURN AROUND
ACCESS ROAD/ PIPE CORRIDOR
MID PIT DIVERSION DITCH
PIT DEWATERING PIPELINE
WMP 2
WMP 1
BLACKFOOT RIVER
LEGEND:
EXISTING GROUND SURFACE CONTOUR AND EL, FEET
PROPOSED WATER MANAGEMENT SYSTEM GROUND SURFACE CONTOUR AND EL, FEET
PROPOSED TOPSOIL STOCKPILES
EXISTING ROADS
EXISTING DRAINAGES
WETLAND AREA
EXISTING RAILROAD
PROJECT BOUNDARY
PIT DEWATERING PIPELINE
500 0 500 1000 FEET
CLIENT
P4 PRODUCTION LLC
PROJECT
BLACKFOOT BRIDGE
TITLE
WATER MANAGEMENT SYSTEM
GENERAL ARRANGEMENT PLAN
DESIGNED BY CCL CHECKED BY RTB DATE
DRAWN BY CCL APPROVED BY RTB 01/31/12
FILENAME 1222F88
FIGURE no. 2
REV D

4.2 Overburden Seepage Management System

Under the original Overburden Seepage Management System (OSMS) (P4 2010c), each external overburden pile (EOP and NWOP) was to be constructed with an OSMS to manage seepage. Under this Revised Water Management Plan, the NWOP has been eliminated and therefore, no OSMS is needed for that facility.

P4 will construct a seepage management system which is described in the Revised Overburden Seepage Management System plan (P4 2012c). The plan includes installation of the following system components to intercept and control seepage that may form in the EOP:

- Groundwater Underdrain System – Collects and directs shallow groundwater occurrences within the footprint of the EOP through a system of perforated pipes which will direct natural groundwater to a discharge point outside of the footprint of the overburden pile. The perforated pipes will be constructed with a controlled slope to minimize pooling in the pipes and ensure gravity flow to the discharge point. The Groundwater Underdrain System will protect the stability of the overburden pile by preventing upward hydraulic pressure and will protect groundwater quality by preventing contact with overburden materials.
- Compacted Clay Subgrade – P4 will construct a clay amended subgrade to form the foundation of the overburden pile. This subgrade will be 1-foot thick and will form a low-permeability layer which, prior to installation of the GCLL cover, or in the event of a significant cover failure after installation of the cover, will collect and direct seepage to collection drains.
- Seepage Underdrain System – Seepage collected on top of the clay subgrade layer will be directed to perforated pipes that will direct the flow to a pipeline at the toe of the EOP. The clay subgrade layer beneath the perforated underdrain pipes will be constructed with a controlled slope to minimize the occurrence of low spots within the piping and ensure collected seepage gravity drains to the toe drain collection pipeline.
- Toe Drain Collection and Seepage Conveyance Pipeline – Seepage delivered from the Seepage Underdrain System will be directed to this system and will be conveyed to pond EP1 or to the EOP Diversion Culvert. The seepage will then be directed to pond CP2 and/or the Water Management Pond System (WMP1 and WMP2) for evaporation.
- Hydraulic Break – P4 will install a hydraulic break on the up-hill sides of the Meade Peak material (seleniferous overburden) cell to intercept meteoric water that infiltrates from adjacent areas and directs the seepage away from the Meade Peak material. The hydraulic Break will consist of a zone of coarse, free-draining non-seleniferous overburden material placed around three sides of the Meade Peak cell.
- An access road will be constructed along the toe of the EOP to allow maintenance equipment to access all sediment ponds, BMPs, and seepage collection facilities within the unnamed tributary. The road is designed and located to minimize impacts to wetlands and non-wetland waters of the US and will augment other BMPs included in the Revised Mine and Reclamation Plan (P4 2011a).

This system will be monitored for flow and seepage quality as part of the site-wide water monitoring program.

4.3 Best Management Practices

Best Management Practices (BMPs) will be employed throughout the Blackfoot Bridge Mine area to direct runoff water, run-on water, and capture sediment that moves from disturbance areas in response to precipitation events. Many of these BMPs are described under Section 4.1 above. Other BMPs that will be used include the following:

- Reclaiming disturbed areas as soon as practical;
- Installing toe berms at the edges of growth media stockpiles to capture runoff from the piles;
- Constructing shallow depressions along roadways to reduce sediment runoff in road-side ditches;
- Conventional seeding or hydromulching disturbed areas including growth media stockpiles plus appropriate cut or fill slopes to bind the soil;
- Installing rock-check dams and silt fences to trap sediment on slopes and upland areas; and
- Using silt fences and/or straw wattles to capture and retain sediment.

Vehicle and construction equipment will not be allowed within the currently existing wetlands and non-wetlands unless specifically required for the construction and maintenance of those areas (see Section 4.1).

4.4 Wetlands and Waters of the U.S.

As indicated in the Section 1.0, the Revised Water Management System will be constructed in areas that include 8.43 acres of wetlands and non-wetland waters of the US. Wetlands and waters of the US that will be affected are shown in Table 2. The Revised Water Management System is designed to prevent discharge of impacted surface water and all water generated during mine pit dewatering to the Blackfoot River, while maximizing the volume of water meeting surface water quality criteria that can be returned into the water shed.

The "Compensatory Mitigation Plan for Waters of the U.S." (P4 2012d) identifies methods and sites where wetland habitat will be restored to offset losses associated with the Blackfoot Bridge Mine Project. Although proposed changes to mine operations (refer to Section 1.0) will reduce the wetland acres affected by the mine to 8.43 acres, P4 intends to mitigate for loss of 9.43 acres consistent with the original plan.

TABLE 2
Wetlands and Waters of U.S.

Mine Component	Affected Unit	Waters of the US Affected (acres)	Wetlands Affected (acres)	Total Acres Affected
EOP	Wetland E	0.0	0.08	0.08
Truck-Railroad Crossing	Wetland L	0.0	0.67	0.67
Truck Turnaround	Wetlands AA and BB	0.11	0.08	0.19
Fish Pond Liner Fill	Wetland K and Fish Pond	2.82	3.27	6.09
Water Mgmt Structures	Wetlands F, G, H, I, J	0.34	1.06	1.40
Total		3.27	5.16	8.43

4.5 Reclamation

P4 will use the Revised Water Management System during the reclamation and post-closure period of the Project. The system will continue to control run-on and runoff water to ensure that off-site water quality and wetland areas are protected. P4 will coordinate the management and monitoring of the system with IDEQ and BLM.

Once IDEQ and BLM have determined that the water management system or portions of the system are no longer needed to support reclamation, P4 will remove ponds, ditches, and non-biodegradable water management BMPs. Natural drainages will be restored such that surface water flow will be reestablished. Sediment or fill material deposited in wetland areas will be carefully removed, as feasible, to allow the wetland to recover, thereby reestablishing pre-disturbance habitat.

5.0 REVISED ADAPTIVE MANAGEMENT PLAN

As described in Section 4.0 above, P4 has designed the Water Management System to control water that could require management (e.g., contact storm water and pit sump water) associated with the Blackfoot Bridge Mine Project. Each pond and ditch in the system has been designed with a specified capacity to allow P4 to maintain water within the system and to discharge water to surface water only if it meets Idaho water quality standards.

As shown on Figure 2, many of the water management ponds are situated in between or above wetlands within the ephemeral drainages (i.e., ponds EP1 – EP3 located in the unnamed tributary above Fish Pond; NEP1 located in unnamed tributary that includes Beaver Pond). Water collected in the water management pond system will be stored to allow P4 to sample and analyze the water to determine whether it can be discharged to Wetland X (water that meets discharge criteria) near the Blackfoot River or directed to pond CP2 and the water management ponds (WMP1 and WMP2). The ponds will also be used to capture sediment that will result from runoff from the EOP that is not trapped by the BMPs to be employed on the site.

Sediment control pond NTP will be constructed to control runoff from the North Tipple area and will also serve to reduce the sediment load in runoff from the south end of the North Pit (**Figure 2**). Runoff from the northwest end of the North Pit area will not be captured by sediment control dam(s) under the current design of the mine's water management system. During placement of the laminated geosynthetic clay liner (GCLL) over the backfilled North Pit, drainage swales will be constructed parallel to the GCLL anchor trench. The drainage swales and storm water best management practices (BMPs), such as silt fencing and straw wattles, will be the primary methods used to control sediment in runoff from the backfilled North Pit. The drainage swales will be graded to direct runoff to pond NTP or another pond constructed in the same proximity. If an additional pond is determined to be necessary, the IDEQ and BLM shall approve the design prior to construction.

Given the variability in weather patterns and annual moisture conditions from one year to the next in the Blackfoot Bridge Mine Project area and the sequence of mining and concurrent reclamation, there is variability in whether any particular pond's storage capacity will be needed to manage site water during any given year or season.

The primary area of focus of this Revised AMP is the EOP and the nearby unnamed tributary that extends down to Wetland X and includes Fish Pond. This ephemeral drainage will contain water management ponds to control surface water quality and quantity in the project site. The areas currently containing wetlands and waters of the U.S. located within the unnamed tributary that includes Fish Pond present the best opportunity for an adaptive water management approach. All other water management dams and run-on control structures proposed for the Blackfoot Bridge Project are located outside of wetlands.

To achieve the objectives of the Revised Water Management Plan, P4 developed the original AMP Water Management Plan (P4 2010d) for the unnamed tributary and Fish Pond to be implemented during initial construction of the project and subsequent operation of the system. Consistent with the original AMP Water Management Plan, this Revised AMP Water Management Plan will be implemented on an adaptive management basis when certain criteria are met and are identified as Adaptive Management Actions for the plan. Using this type of approach, P4 will be able to minimize impacts to current wetlands and non-wetland waters of the US in the unnamed tributary and Fish Pond while ensuring adequate capacity for water storage is available when necessary to protect off-site water quality. The Revised AMP Water Management Plan is first discussed below followed by a description of each Adaptive Management Action including the criteria that will be used by P4 to implement specific management actions.

5.1 AMP Water Management Plan

The infrastructure needed to implement this Revised AMP is the same as that associated with the original Water Management Plan for the Blackfoot Bridge Mine. The design of water management dams (EP1 – 3) includes a decant piping system with valves that can be opened to allow water to flow through the dam or closed to allow water to pond behind each dam[2]. In addition, a layer of coarse rock will be placed in the stilling basins below each dam to control velocity of discharge from each decant pipe and/or spillway. Coarse rock will also be placed in downstream portions of the existing channel for approximately 20 feet below each dam to reduce erosion that will be caused by flow from the stilling basins thereby protecting the wetland areas. It is not anticipated that placement of coarse fill rock will extend into individual wetlands located between each water management dam; however, should erosion begin to occur in the wetland

[2] Refer to Appendix D of the Revised Water Management Plan (P4 2012a) for design details.

areas, P4 will extend the layer of coarse rock as needed to check flow velocity and protect remaining portions of each wetland.

As described in the Revised Water Management Plan (P4 2012a), all sediment ponds (EP1-3) will be constructed during initial stages of project development to ensure that P4 will have the ability to respond rapidly to changing water management conditions during operations at the Project site. Construction of these facilities during the initial phase of project development will also allow the dams and flow-through valve systems to be installed when site conditions are optimum for construction activity and will reduce the potential for sediment from dam construction to flow into areas that currently contain wetlands in the unnamed tributary.

Under this Revised AMP, water management for the unnamed tributary and Fish Pond will allow all water that reports to the drainage to pass through a series of sediment ponds. Piping (with a valve) will be installed at the base of each dam to allow (when the valve is open) uninterrupted flow to Fish Pond as long as the surface water meets water quality criteria. Under this management condition, water quality and areas currently containing wetlands and waters of the U.S. will be minimized by mine development.

Closure of the valve will allow P4 to impound water in each EP pond for a variety of reasons including responding to water quality issues, to settle sediment, or for monitoring purposes. The system will allow P4 to manage each pond independent of the other ponds. Impounding the water behind the dams will facilitate sediment settling in the wetland areas. See Section 4.5 for removal of sediment as part of reclamation.

The total water storage capacity represented by these sediment ponds is as follows (total capacity of all three ponds is 16.1 acre-feet):

- EP1 = 8.8 acre-feet
- EP2 = 4.5 acre-feet
- EP3 = 2.8 acre-feet

Construction of the EP dams will include excavation and regrading portions of the existing channel (currently non-wetland waters of the U.S.) to key each dam into the subgrade of the unnamed tributary. As indicated above, coarse rock or small riprap will be placed in the stilling basin for approximately 20 feet below each dam and potentially, placed along the natural channel that receives discharge from each stilling basin.

Based on current designs, approximately 1,240 cubic yards of fill material including clean rock or small riprap would be placed in non-wetland waters in the unnamed tributary associated with construction of the water management dams, stilling basins, and discharge channels. The total surface area represented by non-wetland waters in the EP dam footprints is approximately 2 percent of the total dam footprints (approximately 2,315 square feet of non-wetland waters and approximately 111,700 square feet of total dam footprint). Approximately 1,230 cubic yards of fill will be placed in non-wetland waters channels for the construction of the sediment control dams, stilling basins, and discharge channels. The remaining fill material, approximately 10 cubic yards, will consist of the coarse rock or riprap placed along approximately 20 feet of non-wetland waters channels to control flow velocity and protect the wetlands. As part of this

Adaptive Management Plan, no rock fill will be placed in the wetlands unless specified by Section 5.2 of this Plan.

Construction of a lift on the Fish Pond dam to increase the storage capacity is a component of the original and Revised Water Management Plan (P4 2012a). Increasing the capacity of Fish Pond by raising the dam and spillway height is included as an Adaptive Management Action in this section (see Adaptive Management Action No. 4 below). This management action would only be implemented if ongoing water quality monitoring indicates the need for additional retention time to ensure water meets permit limits prior to discharge. P4 will however, repair the existing dam on Fish Pond during the initial stages of project development. Repairs will include addition of clay materials to the dam and selected locations in the bottom of the pond to seal the pond and decrease leakage as described in the Revised Water Management Plan. Total pond capacity of Fish Pond without raising the dam is approximately 10 acre-feet.

5.2 Adaptive Management Actions

This section includes descriptions of Adaptive Management Actions that will be implemented by P4 to reduce or minimize effects of the Blackfoot Bridge Mine on currently existing wetlands and non-wetland waters of the US located within the unnamed tributary and Fish Pond. Specific site water conditions that will serve as a "trigger" to implement each Management Action are also identified.

5.2.1 Adaptive Management Action No. 1

Site Water Condition

Analysis of surface water samples collected at monitoring stations in the unnamed tributary exceed the state of Idaho water quality turbidity standard [turbidity, below any applicable mixing zone set by the Department, shall not exceed background turbidity by more than fifty (50) NTU instantaneously or more than twenty-five (25) NTU for more than ten (10) consecutive days and/or visual observation of overland flow of sediment-laden water from the toe of the EOP and access road into the unnamed tributary].

Management Response

P4 will close valves on the pass-through pipe in EP1-3 to prevent discharge of water resulting in water ponding behind each EP dam. The decant system will be monitored to ensure each pond of water is retained for sufficient time to allow settlement of suspended solids. Once sediment has been settled and water meets discharge criteria, the water will be decanted to Fish Pond and/or CP1 for discharge to Wetland X.

As water fills the pond area behind each EP dam, the pool formed will extend to currently existing wetlands and non-wetland waters of the US located within the unnamed tributary to Fish Pond. Suspended sediment in the water will settle into the currently existing wetlands and non-wetland waters as the water velocity slows.

If water quality does not meet discharge criteria (for turbidity or COPCs), the water will be discharged to CP2 for storage and evaporation through the OSMS pipeline system or the EOP diversion culvert at EP1.

5.2.2 Adaptive Management Action No.2

Site Water Condition

Selenium concentration in surface water samples collected at monitoring stations in the unnamed tributary along the toe of the EOP exceed the water quality standard (0.005 mg/L).

Management Response

P4 will close valves on some or all of the EP dam system to impound water that exceeds discharge standards. P4 will continue to sample and analyze water in each pond to confirm and isolate selenium loading. Should water quality in the EP pond system improve to meet discharge criteria, water in the ponds will be released to Fish Pond and/or pond CP1 for discharge to Wetland X. Additionally, any initial exceedance of the water quality standard for selenium will prompt an inspection for potential causes including seeps (see Section 5.2.3).

Several options are available in the circumstance where water quality of specific EP ponds does not meet discharge criteria. In addition to possible implementation of actions identified in Section 5.2.3, actions may include the following:

- The water could be pumped into the OSMS seepage collection pipe and sent to CP2; and
- Water in EP2-3 will be discharged to EP1, where it will either be discharged into the unnamed tributary or conveyed to CP2 and then to WMP1 and/or WMP2 for storage and evaporation.

5.2.3 Adaptive Management Action No. 3

Site Water Condition

Seep(s) is/are discovered in the foundation of the EOP, the toe area of the EOP, or within the unnamed tributary drainage basin; water quality of the seep(s) indicates elevated selenium and/or COPC concentrations.

Management Action

P4 will complete an excavation of the seep(s) for the purpose of creating a collection sump for water associated with the seep(s). Water collected in the sump will be pumped or gravity drained through a lined ditch to the OSMS seepage collection pipeline system. Seepage from the sump will be discharged into the pipeline and transported to CP2 and/or the WMP system.

Depending on the location of the seep(s) within the unnamed tributary, construction of the sump and collection facility could result in sediment, soil materials, and clean rock/fill material being placed into the currently existing wetlands and non-wetland waters of the US authorized by the Section 404 permit. P4 will implement BMPs (such as silt fences and run-on control ditches) to control and minimize the movement of sediment into the currently existing wetlands and non-wetland waters of the US associated with sump and ditch construction.

In the circumstance where water quality associated with a seep reflects natural groundwater conditions, P4 will review the need to capture and convey the seep water. A decision as to whether to take action on this type of seep will be dependent on the volume of water emanating from the seep and what effect that flow will have on the overall capacity requirements of the water management system. Diversion of this source of water to eliminate its flow into the water management system may require similar actions as described

above including placement of clean rock fill for road access, construction of a sump, pipeline, and/or lined ditch to convey this water.

If needed, only after attempts in isolating seeps or sources are unsuccessful, clean rock may be used to protect wildlife from exposure to the impacted waters. See Section 6.0 for notifications requirements.

5.2.4 Adaptive Management Action No. 4

Total storage capacity of the EP pond system and Fish Pond will be 37.9 acre-feet when the Revised Water Management Plan is fully implemented. This plan is the same as the original plan and includes raising the Fish Pond dam by 5-feet, which will result in increasing the capacity of Fish Pond from 10 acre-feet to 21.8 acre-feet. For purposes of this Adaptive Management Action, it is assumed that the dam on Fish Pond will initially remain at its current elevation. At Fish Pond's current dam elevation, the total storage capacity of the EP ponds and Fish Pond is reduced to 26.1 acre-ft.

Site Water Condition

Total suspended sediment (TSS) and/or turbidity concentrations in runoff water for EP ponds (EP1- EP3) and Fish Pond indicate the need for additional retention time to ensure the water meets permit limits prior to discharge. Additional capacity in the EP ponds and Fish Pond is needed to provide adequate retention time necessary to manage the water before it is discharged at CP1 under the requirements of an MSGP (or NPDES permit if required for the project by EPA) and to avoid mixing Fish Pond water with impacted water (e.g., pit dewatering water) in CP2 and/or the WMP1-2 pond system.

Management Response

P4 may raise the height of the dam and spillway associated with Fish Pond up to five feet. The maximum increase in storage capacity would be approximately 11.8 acre-feet in Fish Pond bringing the total capacity of Fish Pond to 21.8 acre-feet. With this additional capacity, the total capacity of the EP and Fish Pond system would increase to 37.9 acre-feet. The additional capacity in Fish Pond would provide additional retention time that would allow more water to be managed by providing time for suspended sediment to settle, provide additional time to determine the quality of the water, and help ensure that water meets discharge criteria prior to discharging at CP1.

The increased capacity of Fish Pond will also increase the likelihood that more water could be discharged to CP-1 during the life of the Blackfoot Bridge Mine project. Once the EOP is reclaimed, runoff water will contact growth media that had been placed over the entire EOP surface. Therefore, the primary function of the EP ponds and Fish Pond would be to allow sufficient time for sediment to settle and meet discharge criteria for TSS and/or turbidity.

5.2.5 Adaptive Management Action No. 5

Section 4.2 provides the details of the OSMS, including the Groundwater Underdrain System. The groundwater underdrains would direct natural groundwater within the footprint of the EOP to a discharge point outside of the footprint of the overburden pile. The Groundwater Underdrain System would protect the stability of the EOP by preventing upward hydraulic pressure and would protect groundwater quality by preventing contact with overburden materials. Periodic monitoring of the discharge points of this underdrain system is set forth in the Environmental Monitoring Plan.

Site Water Condition

Selenium concentration in the groundwater underdrain samples collected at monitoring stations in the unnamed tributary along the toe of the EOP exceed the surface water quality standard (0.005 mg/L).

Management Response

The underdrains discharge points that exceed 0.005 mg/L for selenium will be redirected to the seepage underdrain system for management in the WMP1-2.

6.0 NOTIFICATION

P4 will provide notification to COE, BLM, IDEQ and U.S. Environmental Protection Agency 5 business days prior to dredging or placement of fill materials in currently existing wetlands and non-wetland waters of the US that will be affected by this AMP. Notification may include phone call or e-mail as long as written notification is provided within 5 business days of such notification. Written notification shall include a description of the issue that triggered this AMP and estimated amount of dredging or filling anticipated as part of responding to the issue. Sample results from surface water monitoring stations will be reported in accordance with Environmental Monitoring Plan (P4 2009b).

7.0 REFERENCES

BLM 2009. Draft Environmental Impact Statement, Blackfoot Bridge Mine. BLM Pocatello Field Office, Pocatello, Idaho.

JBR Environmental Consultants (JBR). 2003. Waters of the US/Wetland Delineation. Monsanto Company Blackfoot Bridge Property, Caribou County, Idaho, September 2003, 27 pp. plus figures.

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P4 Production LLC (P4). 2008a. Revised Blackfoot Bridge Mine and Reclamation Plan. P4 Production LLC, Soda Springs, Idaho.

P4 2008b. Joint Application for Section 404 Permit, Preliminary 404(b)(1) Showing and Conceptual Mitigation Plan. Prepared for P4 by AMEC Geomatrix, Inc., Helena, MT.

P4 2009a. Assessment of Potential Wetland Mitigation Sites and Preliminary Design. Prepared for P4 by AMEC Geomatrix, Inc., Helena, MT.

P4 2009b. Draft Environmental Monitoring Plan, Blackfoot Bridge Mine, P4 Production LLC, Soda Springs, Idaho.

P4. 2010a. Blackfoot Bridge Revised Mine Water Management Plan. Submitted to: Bureau of Land Management, Pocatello Field Office. Prepared for P4 by AMEC Geomatrix, Inc., Helena, MT

P4 2010b. Water Balance Report, Blackfoot Bridge Project, Prepared for P4 Production LLC by AMEC Geomatix, Inc. and Ecological Resource Consultants, Inc. Englewood, Colorado.

P4 2010c. Conceptual Overburden Seepage Management System. Prepared for P4 by AMEC Geomatrix, Inc., Helena, MT, November 2010.

P4 2010d. Adaptive Management Plan for Adaptive Management System. Prepared for P4 by AMEC Geomatrix, Inc., Helena, MT. September.

P4 2012a. Revised Water Management Plan. Prepared by AMEC Environment and Infrastructure, Inc. Missoula, MT. August.

P4 2012b. Environmental Monitoring Program. Prepared by AMEC Environment and Infrastructure, Inc. Missoula, MT. May.

P4 2012c. Revised Overburden Seepage Management System. Prepared for P4 by AMEC Environment and Infrastructure, Inc., Helena, MT. August.

P4 2012d. Compensatory Mitigation Plan for Waters of the U.S. Prepared for P4 by AMEC Environment and Infrastructure, Inc. Helena, MT. February.

Attachment D
P4 Production, LLC./Blackfoot Bridge Mine
2012 Inspection Report (CGP)